ESTABLISHED IN 1872

PAPER TRADE JOURNAL

With Which Is Combined

Vol. XCVI, No. 13 — PAPER — Thursday, March 30, 1933

Paper Business Continues to Show Improvement

Following Reopening of Banks In Chicago, Demand for Supplies From General Paper Merchants In Ten Days Exceeds Request During Any Period of Even Thirty Days During Past Year—Recent Gains Reported In Book Paper Market Well Maintained—Sulphite Bond Quotations Firm—Kraft Wrapping Paper Section Hardens

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., March 27, 1933.—Business in the Chicago paper market continues to improve. Some lines are really becoming heartened over actual increase in orders, while in others the very fact that sentiment has improved and prices firmed up has been sufficient to add impetus to the growing belief that the "new deal" is really here. Chicago took an outstanding jump forward immediately following the opening of its banks and retail and jobber supplies of paper were more in demand during the past ten days than in any period of even thirty days in the past year.

Heartening reports come from the book paper market. Here, while no new firming up of prices has been noted during the past week, gains made a short time ago have been held and the market is " doing a good job for itself". Sulphite bond conditions improved last week and the firming up of this market has held during the past seven days as well. Krafts, too, have felt the trend toward genuine betterment and jobbers report a hardening of the market that gives ample evidence of improvement to come. Paper board reports are equally favorable. News prints and ground woods have reported favorable signs the latter market, in particular, experiencing an increase in orders as an indication that a "buyers strike" is gradually loosening up. The Chicago waste market is also a bit more lively.

Container Corp. Elects Officers

Directors of the Container Corporation of America elected on March 23 to serve for the ensuing year were Sewell Avery, Henry B. Clark, George De. B. Greene, William P. Jeffery, Walter P. Paepcke, Stanley A. Russell, Herman A. Fischer, Hugh Strange, H. L. Kelly, E. A. Campbell and J. P. Brunt. New members of the board are Herman A. Fischer, H. L. Kelly and E. A. Campbell, who succeed Edward R. Hankins, John Jacobs, Jr., and Edward A. G. Porter. The new members, with Mr. Brunt and Mr. Strange, constitute the minority group of directors elected by the preferred stockholders. Officers were re-elected. H. C. Baumgartner, assistant treasurer, was chosen treasurer, the office having been vacant during the past year.

Salesmen's Meetings Well Attended

Harold Knott, president of the Salesmen's Association of the Paper Industry, reports that the local meetings of the western division have been "characterized by the largest attendance in many years". Mr. Knott added that "the many problems confronting the various branches of the industry especially those arising from the rapidly changing market conditions, have brought about a frankness of speech and interchange of thought that is in every way commendable. There is more actual cooperation, more spirit of coordinated effort prevalent today than I have witnessed in my experiences with the Association. There is an evident desire to retain even the small advantages that have been secured by dint of hard work. Trade customs are being improved daily and, most encouraging of all, are being rigidly adhered to. This, in itself, is a most optimistic and gratifying sign."

Chicago Paper Association's Activities

The Chicago Paper Association will hold its next regular meeting on Tuesday evening, March 28, at the Bismarck Hotel. The improving tone of the coarse paper market and the opportunities to continue a basic program to elevate the conditions in the local market are expected to form the basis for a lively and interesting session. The Credit Committee, headed by Peter P. Dunne, McNulty Paper Company, is also expected to make a further report on its activities.

Incidentally, two members of the Association are going to be honored on May 1 at a birthday party which has many interesting—and to their friends amusing—sidelights. The two are James F. McNulty and Michael A. McNulty, both of the McNulty organization, who are twins, and who will be forty years old on May 1. The two were born during Worlds Fair year in 1893 and, naturally, their friends will tie this fact up with the opening of the 1933 Century of Progress Exposition. The celebration will be staged at the Chicago Athletic Club.

Scott Paper Pays Regular Dividend

PHILADELPHIA, Pa., March 27, 1933—Scott Paper Company has declared the regular quarterly dividends of $1.75 on the 7 per cent Series A cumulative preferred and $1.50 on the 6 per cent Series B cumulative preferred stock, both payable May 1 to stock of record April 15.

Demand for Paper Somewhat Spotty In Boston

Stronger Undertone Experienced Since Banking Holiday—Quotations on Water-Marked Sulphite Bonds Advanced by Most Manufacturers and Withdrawn by Others—Request for Kraft Wrapping Paper Fairly Satisfactory, With Prices Well Maintained

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., March 27, 1933.—Business in the Boston paper trade was somewhat spotty during the week, barely approaching a fair volume, but the stronger undertone which developed as a result of the bank holidays continued. A fairly good amount of inquiries were received. Fewer mill representatives, it is stated, were in the market. On certain grades prices have been moved up, in fact, most manufacturers have advanced quotations $5.00 a ton on water-marked sulphite bond. Those who have not done so have withdrawn prices. Practically every mill has withdrawn prices on book papers and the remaining few have placed a time limit on present prices. There was a fairly steady demand in small stock orders for fine writing paper. Some special lines were active. For instance, there was an urgent call for diploma stock and diploma covers on the part of schools conducted in special industries with graduations April 1. Buyers of this class have been holding off for some time before definitely placing orders.

There was a fair demand for wrapping paper, in which prices are apparently stabilized for the present time. Indications point to a greater activity in kraft. In box board, business was a shade better. Due to the advance in raw material, old newspapers, on account of a smaller supply, the price of filled news board was marked up to $32.50, compared with the former figure of $30.00, which had prevailed for some time. Now that the bank holidays are generally over, box makers are again busier on jigsaw puzzles.

In paper stock, a smaller supply of old newspapers and a consequent advance in price resulted from the banking situation, it is stated in the trade. Two factors entered into this condition. One was that newspapers generally carried much less advertising, requiring a smaller number of pages. The other was less ready cash available for collectors to use in buying from housewives. Old newspapers are now quotable at .32½ @ .37½, compared with a former range of .30 @ .35. The market on old newspapers is rather active on account of the demand for filled news board, used in making jigsaw puzzles. No 1 mixed papers are also in demand, the price continuing firm at .15 @ .17½. White blank news advanced to .90 @ .95, compared with a former range of .85 @ .90. Other grades of paper stock are firm, in old papers, bagging, new and old domestic rags and foreign rags.

Wheelwright Suit Settlement Pending

Settlement is pending in regard to the suit of the George W. Wheelwright Paper Company against the State of Massachusetts, although Judge Gray in Suffolk Superior Court has approved acceptance of a compromise offer of $35,000 made by the Commonwealth to the receivers of the company. The suit was brought because of diversion of waters from the Ware river for the Metropolitan Water District, Boston. It is claimed that damage was thereby caused the Hardwick mill of Wheelwright. Damages of more than $100,000 were asked. The court has ordered all creditors to file proof of claims against the George W. Wheelwright Company to be in the offices of Receiver Alpert at Boston on or before June 1, 1933.

Paper House Receives Unusual Payment

The deposit of 31,000 United States pennies received by Jacob Bloom & Co, paper dealers, of this city, from a customer, the Weeks Printing Company, Halifax, N. S., in payment of a bill, has been completed. The shipment, which was recently received, weighed more than 260 pounds. The Boston firm has been depositing the sum in the bank at the rate of approximately 50 pounds a day, in order not to flood the bank with the pennies. The Halifax firm, in paying the bill, by the difference in the exchange saved $57. The company had been securing all the pennies turned in from news stands, slot machines and other available sources. The pennies were shipped in a strong wooden crate in rolls of fifty, at a cost of about $1.50 for steamship freight. The Bloom company, however, paid for trucking the shipment from the wharf to their offices.

News of the Trade

John Carter & Co., Inc., has announced a revision of prices on Carterco the folding colored enamel of this concern. The same company is issuing a new sample book of Duratex Cover, containing two new colors, red and black. This cover, made by the Holyoke Card and Paper Company, Springfield, Mass., is attractive and durable, with resilient surface, designed for price lists, sales manuals, booklets, proposal covers, menus, announcements, etc. The cover is made also in tea, brown, green, light blue, white, mouse and dark gray.

Arthur C. Hall, treasurer of John Carter & Co., Inc., who recently returned to his home from the Peter Bent Brigham Hospital, has recovered so that he comes to the office a few hours each day.

A sales meeting of Knight, Allen & Clark, Inc., to review lines of the American Writing Paper Company, was held at the office of the concern Saturday morning. George D. Allen, treasurer of this company, and of the New England Paper Merchants Association, has returned to the office after a week's illness.

It has been reported that Overseas Bond could not be obtained in Boston, but this line is carried in 20-pound substance by Jacob Bloom & Co.

The new plant of the James Flett organization, of Chicago and New York, is to operate in this vicinity as the Center Paper Mill Supply Corporation under state charter.

The Standard Paper Merchandise Company, Inc., Springfield, Mass., has been incorporated. There are 30 common shares having no par value. Officers and incorporators: President, Michael Mazer; treasurer, Moses K. Mazer, 19 Market street, Springfield, and Mendel Mazer.

New Duratex Sample Book Issued

The Holyoke Card and Paper Company, Springfield, Mass., has just issued a new Duratex Cover sample book which shows the range of nine colors and leather embossed finish of this popular cover stock. It is a strong, low-priced cover paper to meet present day requirements. It is suitable for long as well as short runs. The resilient surface of Duratex assures best results at minimum makeready and running time costs.

Philadelphia Paper Market More Buoyant

Distributors of Both Fine and Coarse Papers Express Optimism Over Future Outlook—Anticipate Greater Volume of Orders Following Last Two Weeks of Stabilized and Rising Quotations—Increased Request for Book Stock Experienced

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., March 26, 1933—Encouraging reports everywhere were prevalent and pessimism honestly not existent in a tour of the jobbers of both fine and coarse trade and of the paper stock market. Outstanding among these was the reports from paper stock men that demand for book stock, experienced during the past week was better than for any week for an entire twelve-month past. In similar encouraging fashion comes reports that the 10 per cent advance, passed on by the jobbers to the printers in conformity with mill advance recently reported, has met with a really surprising amount of approval. And finally the stabilization of kraft and the possibility, mayhap even probability of an upward turn here, is reported also to have had a satisfying effect. The seemingly contradictory condition of sulphite paper consumers in opposing the comparatively slight upward revision which the distributors have had to make is explainable by the fact that the up market immediately put the brake of considerable force on the completely demoralized conditions in the printing industry, from which the only possible benefit—and this is a very doubtful one at best—was to the consumer.

Actual and typical illustrations were given by paper distributors which concretely defined conditions in the printing industry as late as mid-March, but which now, apparently, have been checked. A distributor of roofing paper desired to have an imprint placed on samples about ¾ square foot in size. Three printing firms, none of them very large however, gave these prices respectively: $10.00 per thousand; $6.50 per thousand; $4.00 per thousand. And in the other case where three competitive bids had been asked by a man in another line but acquainted with the paper distributors, the bids from exact specifications were $63.00; $35.00; $27.00—the last bid coming from one of the largest establishments in this city. It was cut-throat competition—the desire to take orders irrespective of price or profit as long as the other fellow was kept out of this—which brought the utter demoralization then existing.

Business Shows Advance

Meanwhile, business on the whole, as it was experienced in the four weeks of March terminating on Saturday, is reported by a number of representative jobbers as showing an advance of from 3 to 5 per cent. over the four week month of February and with additional half week which March gives, it is believed that the 5 per cent average may be general. Due recognition is given to the fact that the short month of February was broken into by two holidays, but on the other hand the bank holiday in March was really a more serious factor, more than offsetting the February days of idleness. The general and unfortunate experience, however, still is of a draggy market with hand-to-mouth buying with the urge for immediate deliveries, which, of course, increase overhead. However, the trade is one in opinion that the up tendency shown in the last two weeks of a stabilized and rising market will be most beneficial in inducing purchases of large volume, and in confident anticipation of more orders.

The paper stock men—nearly all of whom report having done business for the last seven months with virtually no profit at all, are in a happy, almost jubilant mood, despite the fact that the week's demand for book stock which is reported as better than at any time during the past year, has brought with it firmer prices with no actual advance thus far. The amount of stock coming in from the printers and publishers is, of course, of very small volume and the market continues to be entirely cleaned up of the better grades. Commons of the better packings are now quite actively in demand, and one local consumer, which however does not buy direct but through an agency, last week for the first time in many months offered an advance of fifty cents a ton on mixed suitable for cardboard stock. The jig saw craze is said to be responsible.

Despite the fact that thousands of the unemployed are preceding ash wagons for the collection of waste paper, the amount in the warehouses of the jobbers is also well cleaned up. As a matter of fact a number of the jobbers philanthropically inclined are doing their bit by actually paying these ordinarily unemployed collectors as much or more than they received from the mills. It can readily be understood that ruling prices of twenty cents a hundred for such paper, the amount that a collector can gather together will not put him in affluence.

Some inquiry has been received for prime overissue magazine stock, but this market does not afford much of this grade. In brief, the local matter is so thoroughly cleaned up of stock of all grades that the packers are of opinion that the slightest increase in mill activity must inevitably result in an advance of price, pointing out that if mills, so many of which are now in three day basis, add but one day of production there would result a 33-1/3 per cent increase, and they must offer some advancement in order to secure enough raw material.

News of the Trade

The D. L. Ward Company's bowling team is holding a three game lead over its nearest competitors—the Whiting Paper Company—in the Paper Trade League bowling contest which has been going on all winter. The Ward team has a record of 23 victories and 9 defeats as against 20 victories and 12 defeats for the Whiting Paper Company. The E. J. Spangler team stands third and closely tied with nineteen wins and thirteen loses. Then follow the Green Team of the Whiting Patterson Company, the Riegert, the Howarth, the Wolf Brothers, and finally the White Team of the Whiting Patterson Company which foots the list with 8 wins and 24 lost games.

Charles McDowell of the McDowell Paper Mills, who was reported in last week's issue as sojourning in Florida, has returned to the city. Mr. McDowell spent most of the time in the Florida waters in the yacht "Charmarie." There he experienced delightful weather and good bathing and good fishing. The banking holiday was very embarrassing for visitors who were found without ready cash; however, things were straightened and on his return

(*Continued on page 38*)

Building Cost Reductions Seen in Radically Novel Wood Assembly Methods

The pulp and paper mills of the country will be interested in the article, "Building Cost Reductions Seen in Radically Novel Wood Assembly Methods," because the new wood construction system described has already proved its value in the construction of pulp and paper mills in Europe.

Economy in construction cost, simplified erection, and marked increases in joint strength and rigidity—which in turn permit wider spans, are elements of primary importance from a pulp and paper point of view.—A. H. OXHOLM.[1]

Introduction of Modern Connectors for Making Timber Joints Will Materially Influence U. S. Building Practice

Introduction in this country of a "revolutionary" method of making wood joints through use of metal connectors, strengthening timber at its critical point and thereby making it available for wider consideration in construction of major structures, is forecast in a handbook on "Modern Connectors for Timber Construction" just issued by the National Committee on Wood Utilization, U.S. Department of Commerce, and prepared jointly by engineers of the Committee and of the Forest Products Laboratory, U. S. Forest Service, Department of Agriculture.

Awaited With Great Interest

Lumber, construction, and metal stamping and casting interests, as well as architectural and engineering circles, it has been reported have been awaiting this report with unusual interest through its several years of preparation. The new practices it makes available for engineering use should result in marked economy in construction, serve as a stimulant to the advantageous investment of capital therein, and prove an innovation and a boon in several special fields to which it will afford new avenues for activity and development. "The application of "Modern Connectors for Timber Construction," said Secretary of Commerce Chapin in releasing the report, "should be given careful study by architects, engineers, and builders. The principle involves economy in construction cost and increased service from building materials"

The handbook "Modern Connectors for Timber Construction" constitutes a re-introduction into this country, in modern, usable form and under economically favorable circumstances, of construction principles which were abandoned in embryonic and vaguely developed stages nearly half a century ago. As a result of war-enforced construction economies, these principles were adopted and advanced by engineers and constructors in the Central European and Scandinavian countries to the point where they have been satisfactorily and economically employed in hundreds of wood-built buildings and major engineering projects.

The connectors which they employ consists principally of metal rings, plates, and disks, of a dowel type or semi-dowel with teeth on one or both faces. In general and in non-technical language the connectors are placed or forced into the faces of wooden members to be joined. The members are then brought together and held by the accustomed bolt, but the bolt becomes primarily a binder and only secondarily a load bearing unit. With their larger circumferences, these connectors take an increased load and distribute it over a larger area of the timbers, thus avoiding the undistributed unit "edge stresses" frequently experienced under bolted connections where the small diameter bolt played against a localized area of the timber face crushing the timber at this point, and, together with bent bolts, accounting for slip with consequent sag in structures. Thus on most conservative laboratory data, the load-bearing capacity of the joint is increased from 4 to 8 times—and in certain cases as high as twelve times—that of the ordinary bolted joint.

A Revolutionary Innovation

The new method is compared by engineers, and even more favorably, with the advance from the ancient hand or cut framing to that of the bolted joint. It has been described by Wilson Compton, president, American Forest Products Industries, and leading economist of the lumber industry, as the "most important advance in wood technique in more than a hundred years." F. Leo Smith, technical secretary, American Institute of Architects, has written that it will "undoubtedly open new fields for the efficient use of wood in many types of construction." B. L. Knowles, leading New England construction engineer who served on a special sponsoring committee as representative of the Associated General Contractors, observes the new connecting methods with "a large vision of the value of this work in future construction projects." Other engineers have described the innovation as "revolutionary" and bound to lead to a new conception by architects and engineers of the place of wood in construction.

There are some sixty odd types of modern connectors used abroad, of which some six or eight are considered important to American practice. No one type will meet all engineering requirements, but it will seldom be necessary to go beyond one or two types for a given construction project.

A Natural Step With

Pre-fabrication, similar to that employed in the use of other structural materials, becomes a natural step in the preparation of wood members for use with the new system. Seatings and borings for the connecting hardware will be made with precision tools at the shop according to specifications, where the standards of materials themselves can also be checked against requirements by experts. Partly assembled and assembled units will be shipped ready for speedy erection. Where intended use requires preservative treatment, this will be given after the borings have exposed new surfaces.

The wide use of these connectors abroad first came to the attention of American industry through Axel H. Oxholm, of the Department of Commerce toward the close of the War, who picked the fact up from German prisoners while on duty in France. As Director of the National Committee on Wood Utilization he has since followed the matter closely for the Department, bringing back, after several protracted investigations abroad, all available European information on the subject. On his

[1]Director, National Committee on Wood Utilization, Department of Commerce, Washington, D. C.

last visit in 1931 Mr. Oxholm viewed in excess of 100 major engineering structures in which wood had proven suitable as the principal structural material as a result of the use of modern connectors.

Some Imposing Examples

Following are some imposing examples of the varied types of structures in which modern connectors have been used in timber joining:

The Saengerfest Halle, Vienna, occupying 5 acres of ground and accommodating 75,000 persons for grand concerts;

Skoda Ammunition Works (Czechoslovakia) largest munitions makers in Europe, have constructed a plant at Mossbierbaum, Austria, using three-hinged arches for a span of 148 feet, which architects and engineers will note with interest;

Westfalen Hall, Dortmund, Germany, free span 250 feet;

Concrete pouring trestle, Bleiloch Dam, length 680 feet, spans 83 feet;

Roald Amundsen Dirigible Hangar, Spitzbergen in the Arctic Northern most Norwegian Island.

German Government Railway Station, Suttgart, (wooden dowel connectors used);

Radio sending towers, Breslau 460 feet high. (A new pair of towers over 500 feet high are now being erected.)

In addition to these examples—"Modern Connectors for Timber Construction" lists a hundred others from Norway, Sweden, Germany, Austria, England, Finland, Switzerland, Denmark, and other European countries.

To reduce this comprehensive information to practical American use, however, required the assembly of extensive engineering data regarding qualities of the metal used in the connectors, and, in particular, the behavior of these connectors when employed with the generally stronger structural woods available in this country. The U. S. Bureau of Standards conducted the necessary metallographic studies to determine the properties of the connectors. And through several years past the Forest Products Laboratory has conducted an extensive series of analyses of their behavior when applied with our woods, both green and seasoned. The result is a comprehensive and dependable compendium of working data for use in American practice.

All of these data have been assembled and presented in the report with professional exactness by Nelson S. Perkins, construction engineer, and Peter S. Landsem, assistant construction engineer, both of the Wood Utilization Committee's staff, and George W. Trayer, senior engineer, of the Forest Products Laboratory.

Special Committee of Collaboration

Secretary Chapin appointed a special committee representing the professions and industries affected, including major consuming groups, to collaborate in the assembly of the material for this handbook and sponsor its publication. Major H. S. Bennion, director of engineering, National Electric Light Association, headed this committee of the following individuals representing professional groups having a total membership of 103,000: Wallace, Ashby, Washington, D. C. American Society of Agricultural Engineers; W. H. Booth, American Petroleum Institute; Ralph Budd, American Railway Association; Clement E. Chase, American Society of Civil Engineers; William F. Chew, National Association of Builders Exchanges; A. S. Downey, and B. L. Knowles, Associated General Contractors of America; Capt. Ralph H. Higgins; R. R. Hornor, American Institute of Mining and Metallurgical Engineers; Henry G. Perring, American Engineering Council; Col. D. H. Sawyer, director, Federal Employment Stabilization Board, U. S. Department of Commerce, Washington, D. C.; Searcy B. Slack, American Association of State Highway Officials; F. Leo Smith, The American Institute of Architects.

"Modern Connectors for Timber Construction" is a 147 page handbook explaining the connectors and their use, giving the relative value and fields of utility of the several types as determined by European practice and analyses made in this country, and American use data including a discussion of stress and load factors. It is paper bound, amply illustrated, and may be obtained at 15 cents per copy from the Superintendent of Documents, Government Printing Office, or the National Committee on Wood Utilization, U. S. Department of Commerce, Washington, D. C.

Paper Imports and Exports

New York, March 27, 1933.

EDITOR, PAPER TRADE JOURNAL:—

In looking over the statistics furnished on the paper imports and exports of the United States, in your issue of March 16, it is surprising to learn that our exports of wrapping paper for the twelve months period were 19,260,000 lbs. and our imports were:—7,237,000 lbs. of kraft and 2,538,000 lbs. of other wrapping paper. In other words, our exports were double the amount that was imported.

How then, can your propaganda that imports are interfering seriously with the American paper market, have any basis whatever?

Surely such statistics show conclusively that all this propaganda on "Dumping" interfering with American business has no basis whatever, when statistics show imports so small as compared with exports to other foreign countries, where we must contend not only against the low European prices, but also there is no American duty to protect our exports. Yet they are more than two times greater than our imports, which are protected.

An impartial survey of these facts would be interesting reading in comparison with the usual "bunk" that we read from the Import Committee regarding this subject.

ELWIN WALKER, Treasurer,
Walker-Goulard-Plehn Company, Inc.

[NOTE. The PAPER TRADE JOURNAL in covering its proper field, has printed from time to time news relating to the paper industry and its organizations. The fact that the Import Committe of the American Paper Industry has filed complaints against the violation of the Anti-Dumping Act as regards the importance of wrapping papers is a matter of news and reported as such. An official complaint against alleged violation of the existing laws has no relationship to the relative volume of imports and exports of paper. EDITOR.]

Bryant Paper Co. Changes

KALAMAZOO, Mich., March 27, 1933.—At a recent meeting of the board of directors of the Bryant Paper Company, Allan B. Milham, for many years connected with the corporation, was elected secretary of the company.

Felix Pagenstecher, formerly president of the Bryant Paper Company and more lately connected with the Hawley Pulp and Paper Company of Portland, Ore., and the Swigart Paper Company of Chicago, has joined the sales department of the Bryant Paper Company and will be located at the Chicago sales office of the company in the Daily News Building, Chicago, Ill.

CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

Hastings, Minn.—The Smead Manufacturing Company, manufacturer of envelopes, paper filing devices, etc., has approved plans for new two-story addition to paper converting plant, to be about 42 x 45 feet, reported to cost about $20,000, with equipment. General contract has been let to the Graus Construction Company, Hastings, and work will be placed under way at once.

Seattle, Wash.—The Ladd Estate, 506 Hoge Building, has had plans drawn by the Austin Company, Dexter-Horton Building, city, architect and engineer, for a new plant at 4634 East Marginal way, to be equipped for the manufacture of paper boxes and containers, including folding cartons, etc. Structure will be one-story, 150 x 246 feet, estimated to cost over $75,000, with machinery. Bids have been asked on general contract and it is expected to begin superstructure early in April. Architect noted is in charge of project.

York, Pa.—The United Wall Paper Factories, Inc., has adopted an increased operating schedule at local mill, running on a full production, 45-hour week basis. About one-third of the mill only was in service sixty days ago. Additional workers are being employed in different departments.

Oregon City, Ore.—The Hawley Pulp and Paper Company has awarded a contract to the George H. Buckler Company, Lewis Building, Portland, Ore., for the construction of a series of metal and wood flumes and conveyors at its mill, and will place program under way at once.

Clifton, N. J.—The Tobin-Howe Paper Box Company, Inc., has been organized with capital of $100,000, to operate a local plant for the manufacture of paper boxes and containers. It is understood that the new company will take over and succeed to the Howe Paper Box Company, with local plant at 934 Main avenue. Henry and James Tobin, Passaic, N. J., head the new organization.

Elizabeth, N. J.—The Wilson-Jones Company, 3300 Franklin boulevard, Chicago, Ill., manufacturer of loose-leaf paper stocks, paper filing equipment, etc., has engaged Leo F. Caproni, 742 Elm street, New Haven, Conn., engineer, to prepare plans for proposed new plant at Bayway and Lidgerwood avenues, Elizabeth, recently referred to in these columns. New structure will be one-story, 150 x 450 feet, with one-story power house, 40 x 40 feet, adjoining, and is estimated to cost over $85,000, with equipment. It is expected to ask bids on general contract about the middle of April.

Tuscaloosa, Ala.—The Gulf States Paper Corporation has resumed operations at mill, following curtailment for several weeks, reinstating about 500 employes in different departments. It is expected to maintain production on present basis for an indefinite period.

Cleveland, Ohio—The Industrial Rayon Corporation, West 98th street, manufacturer of cellulose rayon products, has completed plans for the construction of a second new unit at its local mill, to be one-story, 40 x 221 feet, reported to cost over $40,000, with equipment. It will be used primarily for storage and distributing service. General contract has been let to George A. Rutherford & Company, 2725 Prospect avenue, and superstructure will be placed under way immediately. The same contractor has work nearing completion on another addition to this mill, recently referred to in these columns. Entire expansion program will cost over $110,000, with equipment. Christian, Schwarzenberg & Gaede Company, 1836 Euclid avenue, Cleveland, are architects for both structures.

Laurel, Miss.—The Masonite Corporation, manufacturer of insulating board products, fibreboard, etc., has increased production schedule at mill to a 60 per cent basis, adding about 250 workers in different departments; the plant has been on a curtailed basis for some time past, and the addition to working quota makes a total of approximately 300 men now engaged at the plant. Day and night shifts will be operative until further notice.

Kansas City, Kan.—The Sealright Company, Inc., Kansas City, has completed the construction of new addition to plant in the Fairfax industrial district, previously referred to in these columns, and will occupy at once for the manufacture of cylindrical paper cans, as well as drinking cups and kindred paper products. The new unit is one-story, 70 x 153 feet, and will have equipment for a rated capacity of about 100,000 paper can units per day. Working force will be increased for operation of the new addition at early date. The company is affiliated with the Oswego Falls Corporation, Fulton, N. Y.

Thorold, Ont.—The Ontario Paper Company, Ltd., has completed the construction of a new electric-steam power plant at its mill, and unit has been placed in operation for regular mill service. The primary equipment consists of three steam generators, each 30,000-kilowatt capacity. Steam will be produced by electric power secured from the lines of the Ontario Hydro-Electric Power Commission, eliminating a daily coal consumption of about 300 tons, as heretofore. The station is expected to show marked efficiency in daily service.

New Companies

New York, N. Y.—Metropolitan Paper Products Corporation has been organized with capital of 200 shares of stock, no par value, to manufacture and deal in paper goods. Incorporators include P. W. Carr and E. A. Charlton, 220 East Forty-second street, New York.

New York, N. Y.—McCarthy Paper Company has been chartered with a capital of $20,000, to manufacture and deal in paper products of various kinds. New company is headed by John D. McCarthy, 4222 Ketcham street, Elmhurst, L. I.

Chicago, Ill.—National Paper Box Manufacturing Company, 917 West Nineteenth place, has been chartered with a capital of $20,000, to manufacture paper boxes and containers. The incorporators include Anton L. Holecek and Edward E. Mohr.

Wilmington, Del.—Cellophane, Inc., has been incorporated under state laws with capital of $10,000, to deal in cellulose wrapping materials, cellulose sheets, etc. E. V. Brown, Elkton, Md., is one of the incorporators. Company is represented by G. Dare Hopkins, Wilmington.

New York, N. Y.—Paper Industries Trading Corporation has been incorporated with a capital of $10,000, to manufacture and deal in paper containers, boxes, cartons, etc. Company is represented by Benjamin Eisenstadt, 1440 Broadway, New York, an attorney.

Cleveland, Ohio—The Buckeye Egg Case Company has been incorporated with capital of 100 shares of stock, no par value, to manufacture and deal in cardboard egg case fillers and allied paperboard specialties. Irwin Fisher is one of the incorporators. Company is represented by Easton & Easton, 447 Leader Building, Cleveland, attorneys.

New York, N. Y.—Ace Fibre Company, Inc., has been chartered with capital of $10,000, to manufacture and deal in fiber products, fibreboard, etc. Company is represented by Jack Cross, 51 Chambers street, New York, attorney.

Paper Bids Asked by Post Office

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., March 29, 1933—Bids will be received at the Post Office Department on April 11 for the annual supply of paper and stationery for the fiscal year beginning July 1. Among items of interest to the trade are included the following:

9,600 sheets gummed white labels in sheets.
7,500 rolls No. 1 kraft plain paper sealing tape.
1,200 rolls white paper tape in rolls.
1,200 dozen transparent adhesive tape paper.
114,000 rolls white computing machine paper.
21,000 dozen white paper tablets.
117,000 sheets black carbon paper on 8 pound paper.
1,980,000 sheets same on tissue known as 11 pounds.
2,283,000 sheets heavy weight black carbon paper.
555,000 sheets medium weight black carbon paper.
2,000,000 printed facing slips.
1,000,000 manila tag board cards.
1,747,000 plain white cards.
500,000 white blank examination cards.
1,300,000—50 per cent rag index cards.
400,000 best quality blank guide cards.
58,000 pressboard guide cards.
265,000 plain manila folders.
126,000 pieces chipboard.
174,000 pounds buff color blotting paper.
200,000 rolls tissue toilet paper.

Clay Geisinger Goes with Gummed Products

[FROM OUR REGULAR CORRESPONDENT]

CINCINNATI, Ohio, March 27, 1933.—Clay Geisinger, who has been associated with the Gumming Industry for many years, has again joined the sales force of the Gummed Products Company, Troy, Ohio, in charge of the Chicago office.

For many years The Gummed Products Company has enjoyed the reputation of manufacturing exceptionally high quality materials in gummed cloth tape, paper tape and flat gummed papers.

Dominion Budget and Paper

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., March 27, 1933.—The Budget presented in the Dominion Parliament this week does not affect the pulp and paper industry directly, but there are various provisions which have a more or less important indirect effect and which add in some degree to the difficulties under which the industry is now struggling. Whether or not representations will be made to the government with a view to obtaining some modifications has yet to be determined. At present leaders in the industry are busy figuring the possible net results of the Budget proposals. The more important changes are in respect to the sales tax. Hitherto many articles used in the processing manufacture in pulp and paper mills have been exempt from the 6 per cent sales tax. All these articles, however, will now be subject to the tax. They include such articles as drier felts, wool jackets, Fourdrinier wires, pulp stones, driver stones, axe handles, and so on. These are some of the high lights. The full list has not yet been worked out, nor has the list of articles indirectly affecting the cost of equipment. The tax will be pyramided in many instances, for all sorts of materials and non-permanent equipment entering into the manufacture of goods already subject to the sales tax will be taxed, and this will have its effect on many necessary purchases by pulp and paper companies. Roughly it is thought that the changes announced will add from 15 cents to 25 cents per ton to the cost of manufacturing news print. In view of conditions in the export market, of world competition, and of depreciated currencies in competitor countries, manufacturers here will have to absorb the added cost, and it is nothing but the blunt truth to say they are in no condition to do so.

Another change is that paper and news print, which hitherto have borne a sales tax of 3 per cent, will now be subject to the full tax of 6 per cent. This, of course, will be paid by the publisher. It is important to note, however, that this applies only to the domestic publisher; the tax does not apply to paper or news print which is exported.

There are other items which affect the industry prospectively. Taxes on profits of corporations have been raised to 12½ per cent. A tax of 5 per cent is imposed at the source on all interest or dividends paid by Canadian debtors to non-residents of Canada. The huge investment interest which American citizens hold in the Canadian pulp and paper industry would make these new taxes important in normal times, but in view of the fact that profits, dividends, and interest payments are practically non-existent under present conditions, the new provisions are only of prospective interest.

Oswego Falls Corp. Tax Decision Soon

[FROM OUR REGULAR CORRESPONDENT]

FULTON, N. Y., March 27, 1933—A decision is expected soon relative to whether or not the Oswego Falls Corp. must pay an additional $7,019.61 tax on its 1930 income or receive a rebate from the government on the $8,149.22 already paid on earnings for that year. The case has been placed before the Board of Tax Appeals which promises an early decision.

The company contends that it is entitled to a deduction of $328,357.25, an item representing depreciation, from its 1930 income whereas the Internal Revenue Department claims that the deduction should be only $268,213.23 and that the tax is due the government on the difference. The case also includes the profits of the Sealright Company, Inc., a subsidiary, for that year. A hearing is scheduled for the near future although no definite date has been fixed.

PAPER TRADE JOURNAL
ESTABLISHED 1872

Published at 34 North Crystal St., East Stroudsburg, Pa. Executive and Editorial Offices, 15 West 47th St., New York, N. Y.

Henry J. Berger
Editor

Ronald G. Macdonald
Editor Technical Section

Herbert J. Laughton
Associate Editor

Thomas J. Burke, C. A.
Editor Cost Section

Lynne M. Lamm,
Washington Correspondent

Price, Per Copy, 10 Cents — United States, Per Annum, $4.00
Canada, including tax, $7.50; Foreign Countries in Postal Union, $6.00

Member Audit Bureau of Circulations

Vol. XCVI New York, March 30, 1933 No. 13

This publication is now and always has been printed on paper made in the U. S. A.

A SPLENDID OPPORTUNITY FOR A PUBLIC-SPIRITED GIFT

A representative educational institution, having a widely known department devoted to the manufacture of pulp and paper, is extremely desirous of obtaining to complete its files, back copies of all the issues of the PAPER TRADE JOURNAL from 1900 to 1911 inclusive. Some paper man or paper firm somewhere doubtless has these issues on hand and it is suggested that it would be a splendid idea to donate them to this commendable cause. The gift would be greatly appreciated by the institution referred to and the doner, we believe, would be repaid many fold in the thought that his kind deed would have far-reaching effect in helping to promote technical education in the pulp and paper industry. To anyone who possesses these back copies and is willing to part with them, but feels that he should be compensated, a suitable price will be paid. Any person or firm who can be helpful in this matter is invited, as soon as possible, to correspond regarding it with the PAPER TRADE JOURNAL.

PROSPECTS FOR BUSINESS RECOVERY

Within the space of six weeks, the country has passed through a major financial crisis and achieved a measure of recovery that not only has gone far toward restoring normal banking conditions but seems to have created a considerable degree of reassurance on the part of business men and the public generally, states the Guaranty Trust Company of New York in its review of business and financial conditions in the United States and abroad.

A large share of the credit for this truly notable record must go to the Federal Administration, which met the emergency with a calmness and vigor that inspired the people with the confidence essential to the success of its program. Due recognition must also be given to Congress and to the general public for rallying to the support of the Government in the spirit of loyalty and cooperation that a national emergency has never failed to bring forth.

Reports that have been received from all parts of the country since the banks began to reopen indicate that the delicate process of resuming normal operations has been carried out with general success. Deposits have exceeded withdrawals by a wide margin, with the result that only a negligible amount of the new currency provided by the emergency banking act has been put in use. Gold previously withdrawn for hoarding has been returned to the banks in large quantities. Business men who, a few weeks ago, regarded the future with vague foreboding are now discussing the prospects for business recovery with a new feeling of confidence in the essential soundness of the nation's financial structure. Prices of commodities and securities are almost uniformly higher than last month, and the exchange value of the dollar in terms of foreign currencies has been well maintained.

Such an abrupt transition from panic to renewed hope probably has no parallel in financial history. While it is still much too early to view the swift succession of events in a broad and detached way, it is possible to distinguish several elements in the situation that combined to produce the favorable effects on public psychology that have followed the shock of the crisis.

In the first place, the situation brought home to every thinking citizen the essential fast that the modern financial system is a credit system and that it cannot function unless individuals consent to observe the rules under which it must operate. No banking system, however sound, can withstand the impact of a concerted demand for cash by all depositors at once. When depositors fail to recognize this fact, financial paralysis is the only possible result.

Moreover, the prompt and decisive action at Washington that was necessitated by the crisis provided a sharp contrast to the inaction that had characterized the period of interregnum since the election of last November. It had been recognized that governmental action was required to remove some of the obstacles to industrial and financial recovery, and such action had become temporarily impossible. The swift series of steps taken by the new Administration and the new Congress brought the assurance that the national Government was again in a position to function effectively.

The very shock of the crisis seemed to bring a feeling akin to relief by removing the suspense and the vague dread that had existed for so many months. Realities that had been avoided had forced themselves into a position where there was no alternative but to face them.

An indispensable feature of the program of restoration was the provision of an adequate supply of currency for emergency needs. The fact that only an insignigcant amount of the new currency has been used merely proves the efficacy of the knowledge that it is available if required. It is an elementary principle of banking that cash is de-

manded in abnormal amounts only when there is doubt as to whether it can be had.

Equally indispensable was the economy bill placed before Congress as an integral part of the emergency program of the Administration. The persistent failure of Congress to come to grips with the budget problem had created in the public mind the fear of involuntary currency inflation, a fear infinitely more disturbing than that arising from the advocacy of limited currency expansion in certain political and business circles. It has often been pointed out that budgetary deficits in times of economic depression are theoretically justifiable, inasmuch as increases in the public debt may tend to counteract deflationary influences and the debt can be reduced with comparative ease after prosperous conditions have been restored. This contention is true only as long as no doubt arises concerning the ability of the Government to bring the deficit under control.

The situation in this country had passed that point. More than a year ago, both the Administration and Congress publicly recognized that the budget should be balanced; and a new revenue law was passed with that purpose in view. Subsequent events have shown that the taxes imposed were grossly inadequate. With almost three-quarters of the fiscal year past, the current deficit is only slightly smaller than that a year ago. An uncontrollable deficit leaves the Government no alternative but to meet its obligations by issuing new currency. Consequently, the assurance that the Administration was determined to reduce its expenditures and to increase its revenue sufficiently to bring the budget into balance without currency inflation was an essential part of the general program of financial rehabilitation.

There has been a good deal of discussion regarding the possible inflationary effects of the new currency provided by the emergency banking law. For the most part, the controversy amounts to little more than a difference in interpretation of definitions. If inflation means merely an increase in the amount of money in circulation there is no doubt that the emergency law makes such an increase possible. However, the amount of actual money in circulation is not such a decisive factor in the monetary situation as it is commonly supposed to be. Most business payments are made by means of checks drawn against bank balances; therefore, the amount of bank deposits outstanding is much more important than the amount of money in circulation as a determinant of purchasing power, demand and, consequently, the price level. Even more important is the velocity of circulation both of money and deposits, which depends on a wide variety of conditions that combine to influence individuals and corporations to spend, or not to spend, the funds at their command.

In so far as an increased supply of money is able to influence the general level of prices, its probable effects depend, first, on whether it is issued in such a way as to place additional purchasing power at the disposal of some individuals and groups without reducing the purchasing power of others by an equivalent amount; and, second, on whether it is capable of widening the base for the extension of bank credit. Measured by either of these standards, the new currency is not inflationary; that is, it cannot directly influence the general price level.

Thus, the new currency will presumably be used only to the extent necessary to offset a shrinkage in bank deposits and will be retired from circulation as soon as the need for it disappears. There is nothing directly inflationary in such a process. The possible indirect effects of its use are not subject to measurement or forecast. To the extent that it relieves the banking situation and contributes to the restoration of confidence, it may lead to an increase in buying, an expansion in bank credit, and the other changes associated with a general business revival, including an advance in prices. In so far as such changes occur, they may be regarded as indirect effects of the new currency or, equally appropriately, as natural results of the already strong reserve position of the banking system as a whole, with its expansive forces released by a favorable change in public psychology.

Taylor & Co. To Start Plant in May

[FROM OUR REGULAR CORRESPONDENT]

NORRISTOWN, Pa., March 27, 1933.—With firm faith in the future of this country and its own industry, Taylor & Co., Inc., of Norristown, manufacturers of vulcanized fiber and phenol fiber will complete the construction of and commence operations in its new and modern plant during the early part of May.

The company will produce a complete line of vulcanized fiber, fish paper and laminated phenolic products including noiseless gears.

The plant is located on the Schuylkill River about twenty miles from Philadelphia, and its erection was started in August, 1932. It is new from the ground up, and is equipped throughout with machinery of special design. The company has been able to incorporate improvements in manufacturing processes tending toward improved quality and decreased costs which are only possible in a new plant and which could not be installed in an older plant except at excessive cost.

The executive organization of Taylor & Co. and its entire operating personnel is composed of men formerly associated with the Diamond State Fibre Company and its subsidiary the Celoron Company.

J. M. Taylor, president; L. T. McCloskey, sales manager and C. N. Jacobs, plant manager all held similar positions with the above companies. All of these men have had wide experience in the manufacturing and marketing of the products which Taylor & Co. will produce.

Maine Plants Rush Beer Labels

Beer, which will be legalized Wednesday, has stimulated industries in at least two Maine communities, says the *Evening News* of Portland, Me.

The Androscoggin Pulp Company at South Windham is working on order for 350 tons of paper wrapping for beer bottles, it was learned. The concern, according to Wilbur Jenkins, general manager, expects orders for 550 more tons next week.

The S. D. Warren Company at Westbrook has orders for 90 tons of labels and more orders are expected soon, John E. Hyde, general manager, said.

FOR PAPER MILLS which use reclaimed pulp, the

SNOWHITE PROCESS

for DE-INKING, DE-FIBERING waste paper . . .

You'll find this process an innovation in the paper industry because Snowhite

- **ELIMINATES** the use of steam or hot water, eliminates shredding
- **RESULTS** in larger yields of stronger, cleaner, whiter and more uniform stock
- **EFFECTS** a substantial saving per ton by requiring less power, labor and heat.

Paper Mills are requested to write for information regarding the application of this economic, efficient process.

American Cyanamid & Chemical Corporation

535 Fifth Avenue, New York

Section of the
Technical Association of the Pulp and Paper Industry
Edited by Ronald G. Macdonald, Secretary

White Paper From Young Southern Pines *

By C. H. Herty[1]

I have made talks before all types of audiences in all parts of the country, but I will tell you frankly that I feel great diffidence in speaking to you men here today, because I am really such an utter freshman in the subject that it is a piece of nerve for me to talk to technical men about paper production, yet we have been having so much fun down in Savannah that I want to tell you something about it.

First of all, I want to express my very deep gratitude to a number of people. There sits George Spence, to whom I owe the first help I ever had in getting this matter started at all, in his laboratory at Johnsonburg, Pa. I want also to thank Dr. Winslow and Dr. Curran for the fine spirit of cooperation and helpfulness shown by the Forest Products Laboratory. Prof. Hibbert and Dr. Johnston at Montreal have been fine, and so have Dr. Kress and Dr. Lewis out at Appleton. And above all I want to express to the manufacturers of equipment our sincere gratitude for their help, without which we could not have secured, with our limited funds, the equipment which is now in operation at Savannah.

I have also brought you a message from an old friend. Just before I left Savannah on Sunday I saw Bill MacNaughton, and he said: "Tell the boys I have learned to enjoy Southern cooking, and I am having as happy a time as I ever had in my life." (Applause.) Bill has a smile on his face that simply won't come off, and it would tickle some of you fellows to see him at work from eight in the morning till dark every day.

Now I am not going to have time to go into great detail about our results, but I brought with me some specimens, and I want to give you at least a rough idea of what we are trying to do. Ever since 1915 the one thing I have worked for and fought for is the independence in chemical matters of the United States. One by one we have closed the gaps, and the great gap lacking today is that of cellulose for paper. And I hope and believe we are gradually seeing our way out of that difficulty, and that from the great open spaces of the South there is going to be turned into the wealth of the Nation a cellulose fiber thoroughly suitable for paper production, ample to supply not only this country's needs but also to build up a great export business. That sounds like a large order, but I am going to try to justify the statement.

The Division of Pulp and Paper Research of the Georgia Department of Forestry and Geological Development was organized on January 1, 1932, to carry out a 5-year program endorsed by the Georgia Legislature, which appropriated $20,000 annually for the years 1932 and 1933 for maintenance and personnel. The Chemical Foundation, Inc., of New York City, had contributed $50,000 for equipment of a pulp and paper research laboratory, on the condition that the State accept the donation and sponsor the work. The Foundation has since contributed additional sums for the chemical and testing laboratory and towards expenses of installation. The equipment manufacturers, realizing the potential field for new business, gave such generous discounts that we have been able to put into operation machinery worth, at a fair market value, about $125,000. Manufacturers of chemicals and other supplies have been equally generous in their terms.

The location of the plant at Savannah was decided upon by the State Commission after the receipt of competitive offers from nine cities in Georgia. Among other advantages, Savannah offered a building which has proved itself wonderfully adapted to the purpose. It is 100 feet long and 200 feet wide, and has a sloping cement floor. At the front door there is a railroad side-track, and a dock at the lower end, right on the Savannah River, in the industrial section of that city.[2]

Equipment is set up in the form of a "U". On the right as one enters the building is stored the wood. We do our peeling by hand, and use a motor-driven saw. The chipper and the grinder were built by the Carthage Machine Company. Electrical control equipment is on the right wall, and in the lower right hand corner the boiler. Fuel oil is supplied without charge by the Gulf Refining Company, through the Industrial Committee of Savannah. Water is furnished gratis by the City, through a six-inch main run in at the top of the building, and we tap this line to take what is needed to the various pieces of equipment. The wood is donated by citizens, land and timber owners, from different sections of the State.

We did not have any money to spend on chip screens and conveyors, but we do have two good strong negro helpers, and we built a little chip screen. The boys put the chips in a sack, weigh them, and the darky carries them up a few steps to the digester platform, and empties them into the digester. We make only three cooks a

* Presented at the Annual Meeting of the Technical Association of the Pulp and Paper Industry, Hotel Pennsylvania, New York City, February 14, 1933.

[1] Research Chemist in charge of the Pulp and Paper Division, Georgia Dept. of Forestry & Geological Development, at Savannah, Georgia.

[2] A more complete description of the plant, with photographs, was published in the PAPER TRADE JOURNAL, 1932 Mill and Mill Equipment Number, October 27, 1932.

week, waiting each time for results of the tests before starting the next cook.

For the three-pocket grinder, the wood is cut into lengths of a foot and a half. We have a 350 h.p. constant speed, synchronous motor and a three-speed gear reduction unit. A Meyer regulator has proven extremely helpful in accurate adjustments and distribution of the load.

Alloy Steel Digester

The digester is a 20-10 chrome-nickel type, without lining, built by Blaw-Knox of Pittsburgh. We have it accurately tested each week, and have not been able to detect the slightest sign of corrosion, although we have made some fifty or sixty cooks. It has a capacity of 60 cubic feet, holds 1200 pounds of green chips, and is equipped with the usual recording instruments. A stock chest has been made into a very satisfactory blow-pit. We use the Chemipulp process acid circulating system. Our acid-making apparatus is on the main floor, so that our small staff can easily and quickly get from one thing to another, and we pump the acid up to the digester head. The lime and water are mixed and rotated in a barrel, and we use liquid sulphur dioxide. There again we had help. Two Southern lime companies give that, and the Texas Gulf Sulphur Company contributes the sulphur, which the Calco Chemical Company converts into liquid sulphur dioxide, without conversion charge.

Two Valley Iron beaters are in the center of the "U", a 300-pound beater, a 50-pound beater. We also have a 1½-pound beater, for hand sheets. We are now adding a third stock chest, because we found we need more storage capacity. An Oliver filter is used for making lapped stock from either groundwood or sulphite by using a small Reeves drive to vary the speed of the cylinder.

The fourdrinier machine, built by Pusey & Jones, makes a 26-inch trim sheet, and the finished paper is rolled up within twenty feet of where the logs started, at the left-front of the building, and right at the door of the testing laboratory, for which a corner of the old warehouse has been partitioned off, and three windows put in for light and ventilation. The Savannah Electric and Power Company supplies unlimited electric current, so we have electric hot plates and electric ovens, although gas is available on the laboratory tables.

PINE PLANTED IN CORN JANUARY 27, 1931; PHOTOGRAPHED JUNE 21, 1932.

SAME PINE PHOTOGRAPHED JANUARY 18, 1933, AFTER GROWING IN SECOND CROP OF CORN.

There is a constant humidity room, with double walls, double door and double windows. Mr. Willis Carrier became interested in our problem, and designed our little machine, which was sold to us for exactly the cost of the materials. I think we have every piece of standard equipment for testing paper under standard conditions, and whatever results we get are comparable with those from other laboratories.

Experienced Technical Staff

George C. McNaughton started out as our head technical man. He was with us a year, and said he had had the happiest year of his life, but just before Christmas he received a fine offer from the Everett Pulp and Paper Company, Everett, Wash. We now have old man "Bill" MacNaughton, who is well worthy of taking George's place, and shares his enthusiasm for the work. George Lindsay was sent down by Pusey and Jones to set up the paper machine, and we were able to get him for a year, and I hope can keep him another year. Bruce Suttle and F. W. Hendrix have both had experience in southern kraft mills. W. F. Allen, chief chemist, has done work on paper at the Bureau of Standards, and his assistant, James Dempsey, has also had paper experience. We have three volunteers, Spencer Noble, Frank McCall and Joseph Fox, all chemical engineering graduates, who work for a year without pay, and do anything and everything asked of them. Then there are the two negro helpers, Robert, the janitor, and Ben, a human derrick, if ever I saw one. He was a stevedore who was hired when we were unloading the machinery, and three men were trying unsuccessfully to move a piece, when Ben stepped up with a laugh and picked up the machine without the slightest difficulty. It is amazing too how he has picked up the technique of the work around the laboratory.

Sapwood of All Southern Pines Suitable

Now I want to apologize to Mr. Macdonald. When he sent me the title for this talk as white paper from *slash* pine, I was so busy telling George goodbye and telling Bill how-do-you-do that I forgot to send him the correct title. When you once give a thing a name it sticks, but it really does not matter what species of pine we use, so long as it is the sapwood. We have five varieties, slash pine, longleaf pine, loblolly pine, old-field pine, and Virginia pine. Keep in mind one thing: our work is confined to sapwood. Heartwood is in our way and gives us bad results. That is where the work varies from anything recorded in the literature, or done in the past.

This disc of slash pine 10 years old, and six inches in diameter, shows you something of the rapidity of growth. It is not an exceptional disc. And I brought this one (eight years old, and six inches in diameter) particularly because they are working on this in Savannah today. That is a tree that was planted from a year-old seedling in 1926. Everybody said Jim Fowler was crazy to plant slash pine on a sand-hill, and yet he brought a tree up to the meeting of the Georgia Forestry Association last year, and set it up in the lobby of the hotel, that was ten inches in diameter and only six years old, grown on a sand-hill, where the forestry people said you could not raise slash pine. They said you had to raise it in a damp place, that it is a tree that loves to keep its feet wet, but we have found that it grows best on the sand-hills. Fowler sent us down a cord of the thinnings from his slash thickets, and we are going to make some paper for him out of those thinnings, the seed for which was planted in 1925, just eight years ago. And now it needs to be thinned out.

We cannot find much record about the early growth of these trees, but we are beginning to think that the loblolly pine grows even faster than the slash. Here is a sample of loblolly that came in the other day. This disc is over seven inches in diameter, yet we know that in 1921 crops were taken off the field where these trees have grown up by natural reforestation,—no seed selection.

Here is a spruce disc from a commercial log sent down from Nova Scotia, five inches in diameter, and the ring count shows that it is some fifty years old. I don't mean to say that you cannot find more rapid growing spruce than that, but this gives you some idea of the relative growth. Many a time, in the case of a warm fall, we get three distinct growths in one year. Just as I was leaving the laboratory Bill MacNaughton handed me, for contrast, this little piece of swamp-grown spruce he happened to have in his pocket. He counted the rings with a microscope, and it is 150 years old. There is another interesting thing about this sample, and that is that on the outer edge you can see the rings plainly without a microscope. Bill says that they drained the swamp, after which the tree went to growing.

Blue Stain Troubles

We have certainly found out the value of intermediate semi-commercial experimental work before you go at things on a plant scale. I held them back down there, and I believe everyone of you will bear me witness that I have never yet advised anybody to put a nickel into a white paper mill in the South. I told the Canadians that a year ago, and I say it to you now. We are not ready to go ahead yet, although I do think we are mighty near it now. If a mill had been started down there, and gone into manufacturing last year, they would have gone broke last summer, as sure as the world. We ran into a thing I never had dreamed about, trouble with blue stain—sap stain, during the summer season. It went all through the wood, and the pulp came out gray. So we went out into the woods to get some fresh logs, and we thought we could save time by having them peeled as they were cut down. When we went out to get the wood, all of it was blue-stained. We put a little basket in the digester, and pulped some sap-stained chips, and the stuff we got was gray. Then we tried all sorts of things. We got in touch with the New Orleans Station, the southern headquarters of the U. S. Forest Service, and Emmons and Chapman and all of them were fine in giving us help. We tried dipping the wood in all kinds of solutions. But I hated to do that, for we did not want to sacrifice an economic advantage by spending money on pine that is not done with spruce. It is a bad principle in any sort of game to give the other fellow a jump on you.

Then Major Pierpont, who is president of the Savannah Chamber of Commerce, and does not know a single thing about turpentine, or pitch, or sap-stain, or paper-making, but has a lot of commonsense, came down to look around. He asked: "Why do you not get ahead of the trouble by working with perfectly green wood?" George McNaughton threw his hands up in the air and replied that everything would be all gummed up with pitch. Grind it? Impossible. Well, I said, we are doing experimental work, and suppose we do lose a day cleaning up? Let's try it. So we went out and cut down some more pines. It was a hot August afternoon, and how those trees did run turpentine. Loblolly is never used for turpentine, but it just poured out that day.

We took the logs to the laboratory, peeled them and next morning put them right into the chipper, right on to the grinder, and, bless my soul, we got a pulp that did not have any tacky feeling whatever! George went around the laboratory squeezing pulp in his hands, and chewing it, trying to find the pitch, and to this day we have not had the slightest particle of pitch from freshly cut pine. If we let our pine season for three or four months, we get some evidence of pitch. That is a paradox. It brings up a question that I do not know how to answer. From our standpoint it is all right, but why is it you have trouble with pitch from spruce, in the North? Has spruce a different resin in it from our pine resin? I wrote to Miss Gerry at Madison and asked if they had done anything on the composition of a physiological resin, but they had not, and I cannot find anything in the literature about it.

Research on Resins Needed

There is an interesting piece of research in there somewhere; I am talking of the physiological resin that is normally in the pine, not the one that is produced when the tree is chipped and worked for turpentine, and those physiological ducts form, that is a secondary resin. Now either that physiological resin of our Southern pines is very different from the physiological resin of spruce, or else, as I am inclined to think is more likely, as the wood seasons this physiological resin undergoes a transformation of the volatile oil, and changes from a non-sticky to a sticky substance. I don't believe the acids have anything to do with it, because whenever you put size on a paper, especially with excessive rosin, you run into acid, and rosin will be all over your machines all the time, anyhow. And yet, won't it be a strange outcome if it should eventually develop that whereas everybody had laid off the South because they thought there would be too much pitch in the pine, the time may come when the pitch troubles are all in the North? That is not at all an unreasonable assumption, because we are not having any trouble. Bill was a doubter when he first came down, but he is a thorough convert

now. And any of you who come down can see for yourselves.

Capital Freed from the Wood-Pile

You may ask, "Well, how can you be assured of a continuous supply of wood for your mills?" I heard George Bearce talking yesterday about 150,000 cords of wood in a wood-pile. And yet I saw a 300-ton kraft mill at Panama City with only 6,000 cords in the yard—ten days' supply. I asked the general manager, "Are you willing to risk running a big mill on ten days' supply?" He replied, "Why not? It comes to us every day in the year, by rail, by barge, even by mule-cart. Why tie up money in a wood-pile when the wood is sure to be right here?" We found that blue stain can be held back, if you leave the bark on the wood. In the worst season of the year, the humid part of the summer, in August, no blue stain appears for three weeks. So there is ample time to get ahead of the blue stain, and in the meantime your money is not tied up in wood.

There is going to be plenty of pulp wood. The reforestation idea is sweeping the state like the fires used to sweep it. They have gone broke in Georgia raising cotton, and a young "cracker" who had a little farm wanted to raise some pine, but he didn't have any money. This is a little human interest story. What did the boy do but write his story to Henry Ford, and ask for a little loan to get his pine started. He got a cold-blooded reply from a secretary, saying that Mr. Ford was called upon for *charity* from so many sources that he could not consider his request. That nearly broke the boy's heart, and he sent his letter up to me in New York. I wrote back, "Do not bother about your big acreage. Try an acre." He borrowed a little money and bought enough seedlings from the State nursery to plant an acre of slash pine, and an acre of longleaf. He wanted to pay that money back as soon as possible, so he planted corn in between the rows of trees. The net result at the end of the first year was that he had charged up all the expense to the corn, even down to the taxes on his land, and he had a fine stand of young pine completely paid for, and a moderate profit on his corn. Now, in these days of depressed agriculture, that is doing pretty good. At the end of his second year he had another crop of corn, and his slash pine stood seven feet high. By actual measurements, slash on uncultivated nearby has grown only half as fast as this. What is going to happen is that we are going to see wood production on these abandoned farmlands in Georgia at twice the rate that is now in the forestry records.

Some Misconceptions Corrected

Now I want to go on to tell you about the correction of certain other errors in thought. There is where the fun comes in, to find out the truth when one has been absolutely and totally wrong. One of these errors is the old conception about *yellow* pine, which is natural, because in the North you saw only the old heart-pine lumber, and that is yellow and full of pitch. But this young sapwood is not even yellow. Why, every one of our groundwood samples is lighter than those from spruce. Old-field pine gives an almost pure white pulp. We have compared ours with spruce ground right in our mill, and with samples from Dalhousie and other mills. Manufacturers have been fine about sending us samples.

The trees we are using average from ten to fifteen years old, and the barked wood runs from five to six inches, average diameter. Density averages from 0.416 to 0.501, corresponding to from 26.50 to 31.35 pounds per cubic foot. The alcohol and ether extracts are extremely low: alcohol, 0.7 to 0.8 per cent; ether, 2.6 to 2.7 per cent; total extractions, 3.3 to 3.5 per cent.

Let me tell you a joke on Clark Everest. I sat next to him at the dedication of the new building of the Paper Institute at Appleton, and he said: "We do not wish you any harm down South, but you are going to have trouble working with the sulphite process because of the temperature of your water, and you will not be able to get your acid strong enough." It scared me, because he was an old hand at it, and I was a freshman. But here are the facts. All down through the Southern country, all along the Atlantic and Gulf Coasts, below the Piedmont area, stick a hole in the ground, and up comes artesian water. And that is what we are using, and the temperature is 72-78 deg. F., the year round. We found that by simply putting lead pipes on the inside of our acid tanks and letting this water circulate through them to take off the heat of the reaction, we have no trouble in building up our free acid to any strength we want. The water has a little sand in it from the bottom of the wells, so we put in a set of rifflers and got rid of the sand trouble.

All cooking temperature rises follow straight-line curves. At present we are using a maximum of 132 deg. C. or 269.6 deg. F. The minimum has been 120 deg. C. or 248 deg. F., and the maximum 152 deg. C. or 305.6 deg. F. The pressure remains constant at 75 pounds. Cooking time has varied from 7¾ hours to 25 hours, 50 minutes, with best commercial results obtained between 10½ and 11½ hours.

In the sulphite cooking we have not been able to detect any difference between high calcium lime and dolomitic lime. A 99 per cent calcium lime and one containing about 35 per cent magnesia have been used. Thorough penetration is obtained when raising the temperature to 110 deg. C. and 75 pounds pressure, in three hours. We made a cook with a soda base, but did not find any especial advantage, except that the screenings are much softer.

The average acid composition is 5.50 per cent total, 4.20 per cent free and 1.30 per cent combined. The acid charge is 1200 gallons per ton of oven-dry chips. Pulp yields run between 43.0 per cent and 45.0 per cent on average cooks, and the screenings are very slight, varying from 0.5-4.5 per cent, the latter figure being from a certain freak run. Extractions run from 0.23-4.5 per cent, depending on cooking conditions.

As to strength, we have not yet been able to produce a pine sulphite having an initial strength equal to that of spruce, but we have produced pulps which on beating show a burst ratio of over 100 per cent (points per pound, based on ream weight of 500 sheets, 24 x 36 inches) and a tear ratio of 130 per cent. The pine sulphites have shown evidence of being more resistant to beating than spruce, and will produce a sheet of greater strength with higher freeness.

Fiber measurements show a length of 3.12 to 3.31 mm., and width of 0.43 to 0.46 mm.; length to width ratio, 81.9 to 82.0. We find there are only minor differences between the three species, slash, longleaf and loblolly. We have just begun work on Virginia pine.

There is one problem we have to solve, a difficulty that you don't have with spruce, namely, the difference between spring wood and summer wood. The spring wood has thin-walled cells, full of juices, and the summer wood, the darker, reddish rings, has thick-walled cells with tiny openings. In other words, we practically have two kinds of wood to deal with at the same time, a delicate thin-walled cell and a thick-walled cell, which have to be ground together, cooked together, and beaten together, because you can't separate them. At least we have not yet been

able to think of any way to separate them commercially.

Our work is confined to news print at present. We have no equipment yet for studying bleaching, although we hope to go on to that next year. But we have bleached a little of the pulp, using a one-stage system, 10 per cent consistency, 95 deg. F. Results showed promise, in that one cook gave a pulp requiring only 9 per cent bleach, with a resulting color of excellent whiteness. Physical tests of news print, run No. 46, groundwood 70 per cent, sulphite 30 per cent, loblolly pine, 3.5 per cent alum added, are as follows:

	(1)	(2)
Weight, 24 x 36 inches—500	32.00 pounds	31.25 pounds
Thickness	0.00386 in.	0.00393 in.
Burst	8.35 pts.	7.80 pts.
Burst ratio, pts./lb.	26.10 per cent	24.95 per cent
Tear, across machine	18.0 grs.	18.0 grs.
Tear, machine direction	21.4 grs.	21.0 grs.
Tensile, across machine	1.11 kgs.	1.20 kgs.
Tensile, machine direction	2.36 kgs.	2.33 kgs.
Porosity, (Gurley, 100 cc.)	37.80 sec.	35.40 sec.
Gloss	33.0 per cent	34.2 per cent

Pine vs. Spruce Grinding

It is peculiar that the man who wrote this sentence in the old bulletin on groundwood, from the Forest Products Laboratory at Warsaw, should be the one to undertake this work at Savannah. Here is what George McNaughton wrote then:

"Loblolly pine requires a dull stone and consequently an expenditure of a large amount of power, but does not yield a pulp of as good a quality as may be obtained from the other pines tested. Although hardly suitable for news print purposes, loblolly pine pulp could no doubt be used as a filler." George has changed his mind since he wrote that!

I could easily see how you might say that this or that condition was different, if we tried to compare our figures on power consumption with results on spruce somewhere else, so we set out to run two grindings under as nearly identical conditions as possible, only in one case using spruce and in the other pine. Through the courtesy of the Scott Paper Company a cord of spruce was sent down from Nova Scotia, and we sawed out about 50 spruce blocks, 3¼ x 3¼, and 18 inches long. Then we made the same number and size of pine blocks. We warmed the stone up on a preliminary run, cleaned out everything, and ran the spruce blocks through, then the pine blocks, under as nearly identical conditions as we could get. I am not ready to put in the exact record yet, as there is possibly a little error in reading the results, and I don't believe in making too definite statements on one experiment, but as a matter of fact we got about ten per cent less power consumption per ton of pulp produced when grinding the pine. I think it is perfectly safe to say that while more power has to be applied to the stone, the rate of production was faster, so that the horsepower per ton of pulp was lower. I feel that it is just as much in error to say that it requires more power to grind pine than spruce, as to say that the wood is too rich in resin for consideration for sulphite pulp. I don't say yet that it is going to be cheaper to grind, but I will say with perfect confidence that it is not going to be more expensive.

Research Records Available

In closing, let me say this: We are carrying on a genuine piece of research down there. We are getting together an enormous amount of data from every cook, every grinding, every run on the paper machine, every set of experiments with the beaters, and detailed records are kept on file on a standard form of card. There is not a secret about the place. Our records are open to anyone who comes to us, who has an interest in paper and pulp production.

Some time during this meeting an invitation will be extended by the Georgia Forestry Association to this Association, to the American Paper and Pulp Association, to the Canadian Paper and Pulp Association and its Technical Division, and also to the American Pulp and Paper Mill Superintendents Association, to come down and meet with them on May 1st and 2nd, at the annual meeting of that association, and see for yourselves what is going on. The Georgia Forestry Association put reforestation on the map in Georgia, and I thing Georgia is ahead of any State in the Union.

The Ocean Steamship Company has a boat leaving New York on Friday afternoon April 28th, and you can take that trip cheaper than you can live at home, for they have offered to any member of these associations a rate of $25 for the round trip from New York to Savannah and return. They are interested, because they see great possibilities of new business in the future.

It is a beautiful time to come to Savannah. The jasmine and azaleas will be in bloom. But more than that, the Savannah Chamber of Commerce has backed up the invitation, and when they start to entertain,—well, they know how!

So we want you to come down, and visit the laboratory, and get out in the woods and see this young pine grow! All we are trying to do is to demonstrate that you can substitute this young pine for spruce, because we want to see white paper mills down in Georgia. If some of you can work it out quicker in your own laboratories, do so and get the glory. But come down, and look over our records, and criticise. We thrive on criticism.

On behalf of the citizens of Savannah, I offer you Southern hospitality, and as the head of that laboratory, let me ask you to come down and see Bill MacNaughton really at work. (Applause.)

New TAPPI Members

The Executive Committee of the Technical Association of the Pulp and Paper Industry has announced the following elections:

James H. Fritz, chemical engineer, Dill & Collins, Inc., Philadelphia, Pa., is a 1925 graduate of Rensselaer Polytechnic Institute. From 1925-1927 he was a research chemist at the Du Pont Rayon Company, Buffalo, N. Y. and from 1929 to 1930 with Meigs, Bassett & Slaughter, consulting chemists.

John A. Hardy, assistant engineer with George F. Hardy, New York, N. Y., has been transferred from Associate to Active membership in the Technical Association.

Gordon I. Hoover, research chemist, Provincial Paper, Ltd., Thorold, Ont., is a graduate of Toronto University and received his Ph. D. from Cambridge, in England. From 1927 to 1929 he was connected with the Department of Cellulose Chemistry McGill University, and in 1929 and 1930 he was engaged in research for the Howard Smith Paper Company Montreal.

Herbert A. Kaufmann, head of Technical Service Department, Stein, Hall & Co., New York, for the past eight years, is a 1921 graduate of the Massachusetts Institute of Technology.

James D. Malcolmson, director of research, Robert Gair Company, Inc., is a 1913 graduate of the University of Kansas. From 1913 to 1915 he was an engineer with the Freeborn Engineering Company, Kansas City, Mo.; in 1915 and 1916, purchasing agent for the Tigre Mining Company, Sonora, Mexico; in 1916 to 1918, fellow in metallurgy of copper and from 1918 to 1922 fellow in research on paperboard containers, Mellon Institute, Pittsburgh, Pa.

Steam Turbines in The Paper Industry*

By S. H. Hemenway[1]

Abstract

A general discussion of the advantages of by-product power generation and a review of installations to fit particular conditions.

Every now and then some experimenter announces the discovery of a scheme for perpetual motion—and is promptly denounced for attempting to circumvent the principle of the conservation of energy. But ways are being developed for the utilization of by-product steam that make getting something for nothing seem within grasp.

Because of the large quantities of low pressure steam used for drying and other process purposes, the paper industry was an early user of by-product power. By-product power is realized by generating steam at a pressure higher than required in the process, and expanding it down to the process pressure through a steam turbine or other prime mover for generating power. The heat of vaporization of the exhausted steam is used to carry out the process requirements, such as that of drying paper.

In a condensing steam turbine plant such as is used in most central stations, the heat of vaporization of the steam at the exhaust pressure is an unusable end-product that has to be carried away by the condenser circulating water. In the condensing steam turbine cycle, the boiler must add to the feedwater the heat taken away to condense the steam in addition to the heat used in producing power. With the by-product power cycle, the only heat added in the boiler in addition to that required for process purposes is that heat actually developing power.

The magnitude of the heat quantities in these two steam cycles is represented in Fig. 1. A large quantity of steam is required to develop a kilowatt-hour with the by-product

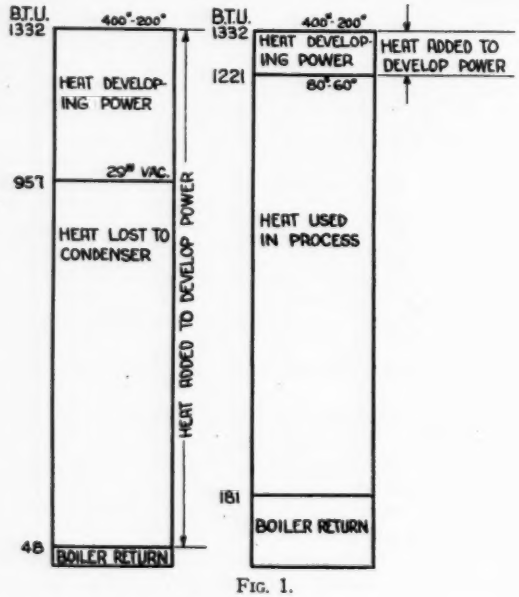


FIG. 1.

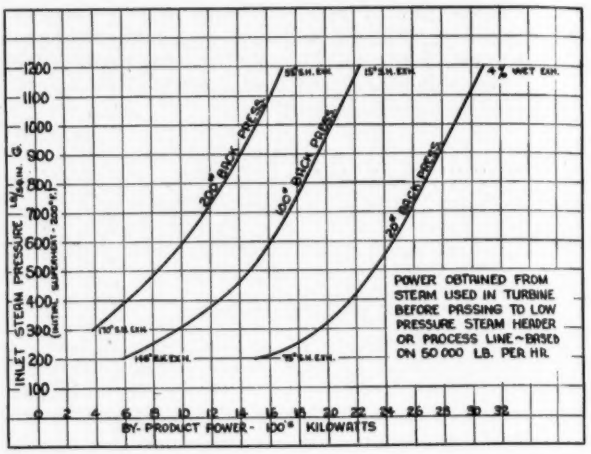


FIG. 2.

power cycle, but the B.t.u. chargeable to power is less. Using the heat values in Fig. 1, the mechanical efficiency being taken as 98 per cent, the electrical, 96 per cent, results in the following:

CONDENSING PLANT

$$\text{Pounds steam per kw.-hr.} = \frac{3412}{375 \times .98 \times .96} = 9.65$$

BY-PRODUCT PLANT

$$\text{Pounds steam per kw.-hr.} = \frac{3412}{111 \times .98 \times .96} = 32.7$$

CONDENSING PLANT

B.t.u. per kw.-hr. at turbine throttle = 9.65 (1332 — 48) = 12400

BY-PRODUCT PLANT

B.t.u. per kw-hr. at turbine throttle = 32.7 (1332 — 1221) = 3630

The amount of power that can be obtained in expanding steam from a higher to a lower pressure is shown in Fig. 2. The middle curve shows that in expanding 50,000 pounds of steam an hour from 400 pound throttle pressure to 100 pound back pressure, 1250 kw. of power is generated; from 800 pounds initial to 100 pounds, gives 1850 kw.; and if a throttle pressure of 1200 pounds is used 2250 kw. of by-product power results.

By-Product Plants Cut Costs

The dollar savings realized in by-product power stations for which figures are available give testimony to the effectiveness of this way of saving money. A 1000 kw. turbine installed in 1928 served as reducing valve between new boilers generating steam at 300 pounds and 200 deg. s.h. and the old 150 pounds boiler plant line supplying generating equipment and digesters.

This unit operated at an average load of 750 kw. The owners state that the value of by-product power generated in the first twelve months exceeded the cost of the additional equipment required for generating this power.

Because of the small increase in amount of heat required to produce steam at some higher pressure, as 1200 pounds, instead of at 200 pounds, new steam generating equipment is frequently justified on the basis of the increased efficiencies that can be realized in up-to-date generating equipment. As the increase in heat required is

---

* Presented at the annual meeting of the Technical Association of the Pulp and Paper Industry, New York, N. Y., February 13-16, 1933.
Contribution of the TAPPI Heat and Power Committee.

[1] Engineer, Westinghouse Electric and Manufacturing Company, Philadelphia, Pa.

only 10 per cent for the extreme range of 1200 pounds and 200 deg. s.h. as compared to 200 pounds and 100 deg. s.h., the increased efficiency of the new equipment may result in generating the steam at the higher pressure with even less coal than was used at the lower pressure. In this case the power obtained in expanding the steam in the turbine to the lower pressure is only subject to the capital cost of the new equipment.

A recent case of this kind concerns a mill having 6740 boiler horsepower generating steam at 120 pounds in h.r.t. boilers. This equipment was in unusually good condition, operating at a boiler efficiency of 68 to 70 per cent. Two condensing turbines of 750 kw. and 1250 kw. capacity were used, the balance of the power being taken from hydro units. Two new boilers were installed generating steam at 425 pounds and 125 deg. s.h., and having a combined capacity of 120,000 pounds per hour. This steam is expanded through a 3000 kw. turbine to the old boiler pressure of 120 pounds. The average turbine output is 2000 kw. The old turbines are still available as spares. The efficiency of the new equipment so far exceeds that of the old that the over-all costs have been reduced by the change.

Turbines Made to Fit

Many such installations have been made in this industry showing that there is a very general appreciation of the advantages to be gained. Often a turbine so installed serves other plant requirements so well that the power obtained comes still nearer to satisfying the urge to get something for nothing. The problem of steam pressure control, temperature control, frequency control, or load control is frequently of major importance. Turbines have been successfully applied to cover each of these requirements, sometimes two kinds of control being obtained on one machine.

Pressure Control at One Point

A turbine expanding steam from a higher pressure to a lower pressure may have a pressure regulator on the turbine exhaust. The turbine will then carry just enough load to satisfy the demand for steam at the exhaust pressure.

Another type of control of pressure at one point is the bleeder turbine, which bleeds out sufficient steam to maintain the desired pressure. In addition to the steam bled, sufficient steam is expanded to a lower pressure to generate the desired power. This turbine is thus responsive to load as well as pressure.

Another type of one point pressure control is the throttle pressure regulator. This finds application where a higher pressure boiler has been installed to supplement a lower

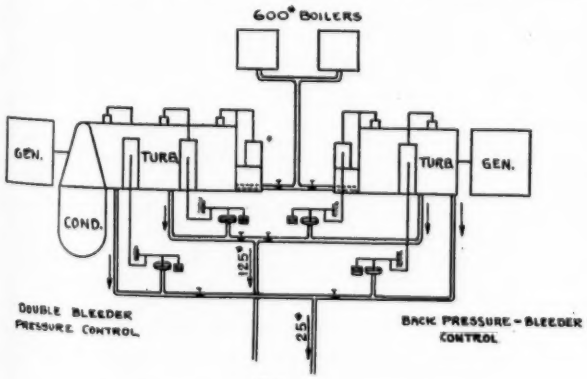


FIG. 4
Turbines Controlling Pressure at two points.

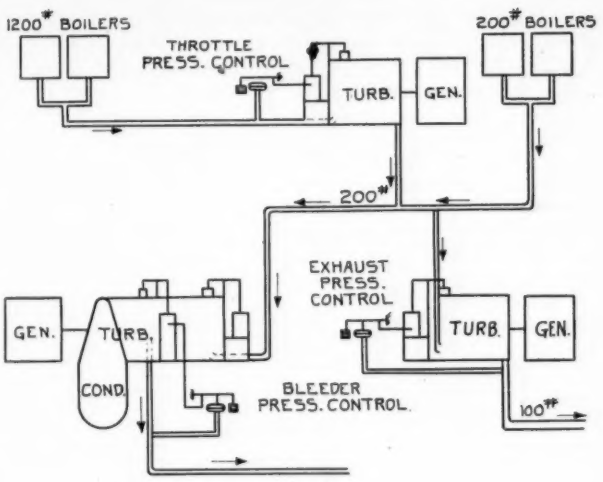


FIG. 3
Turbines Controlling Steam Pressure at one point.

pressure system. It allows the maximum power to be generated in the new high pressure generating equipment of higher efficiency. With this control the turbine passes more steam and carries a higher load whenever the throttle pressure increases because of a surplus of high pressure steam. An application of such controls is shown in Fig. 3.

An interesting paper mill application of the throttle pressure control is a 5000 kw. 25 cycle geared unit taking steam from a 600 pound boiler in accordance with the steam available. This unit also bleeds at 180 pounds to the present boiler system and exhausts at 20 pounds.

Pressure Control at Two Points

The pressure may be controlled in two different lines by means of a back pressure bleeder turbine. In this case the turbine bleeds at one pressure and exhausts at a lower pressure, both under pressure control. The load carried is strictly dependent on the demand for steam at the two pressures. Other prime movers on the line determine the electrical frequency of the system.

A double bleeder turbine may send steam out to two lines at two different pressures, each under pressure control. Sufficient steam is then expanded to a still lower pressure, generally that of a condenser, to carry the required load. Such a turbine may maintain the system

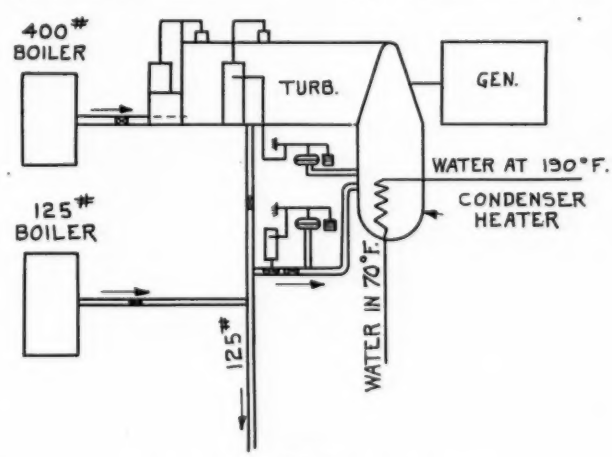


FIG. 5
Turbine Controlling Water Heating Temperature

electrical frequency as well as supply steam at the two pressures. These arrangements are illustrated in Fig. 4.

An interesting special application of pressure control at two points was made on two 1500 kw. turbines installed in 1928. These take steam at 250 pounds and 125 deg. s.h. and bleed to the process line at 125 pounds. About three-quarters of the steam bled is returned at 5 pounds. The control system is so arranged that the turbine supplies sufficient steam to take care of the 125 pound steam demand under pressure control. The turbine governor then admits sufficient 5 pound steam to carry the balance of the electrical load. The 5 pound steam in excess of that required to carry the load by-passes to the condenser, which is used as a water heater. If there should be insufficient 5 pound steam to carry the load, the turbine governor by-passes steam direct from the 125 pound point in the turbine to the 5 pound steam inlet, as the control is also arranged to maintain the correct pressure in the 5 pound line.

Temperature Control

Turbines frequently exhaust to a water heater where it is desired to maintain a constant water outlet temperature with variable amount of water flow. This may be accomplished by having a temperature control element on the water outlet act on the turbine governor. The more usual way is to have a pressure regulator on the water heater, set for a pressure corresponding to the temperature desired.

A recent installation of this type was made on a 4000 kw. turbine taking steam at 400 pounds and 200 deg. s.h. and bleeding to the older boiler line at 125 pounds. The turbine exhausted to a water heater under control of a pressure regulator at 10 pounds absolute to maintain the water outlet of 190 deg. F.

This pressure regulator is adjustable for pressure of 2.5 pounds absolute to 2.5 pounds gauge to suit various water temperatures that may be required. The regulator controls the opening of the turbine valves at the 125 pound

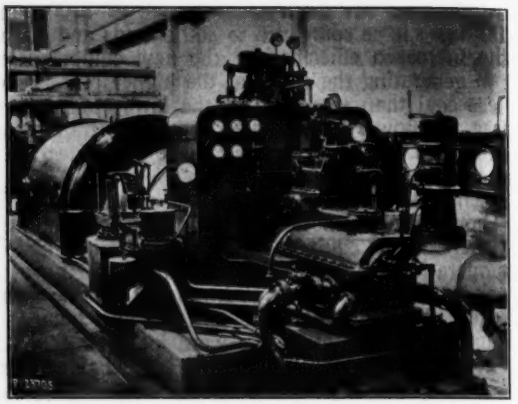


FIG. 6

point to pass just the required steam from that pressure to the water heater. The amount of steam bled at 125 pounds varies with the load and with the amount of steam required for water heating. This arrangement is illustrated in Fig. 5.

Frequency Control

In many paper mills it is essential to hold the frequency within close limits. In order to obtain stability of turbine governing, the usual practice is to make the speed variation from no load to full load 4 to 5 per cent. A governor with no speed variation between no load and full load would not be stable, and would not hold a steady frequency.

A governor speed compensator has been developed combining the stability of the usual turbine governor with the characteristic of holding the same frequency at all loads. This it does by bringing the frequency back to the mean value after the load change.

This speed compensator may be applied to any condensing, non-condensing, or bleeder turbine. Generally only

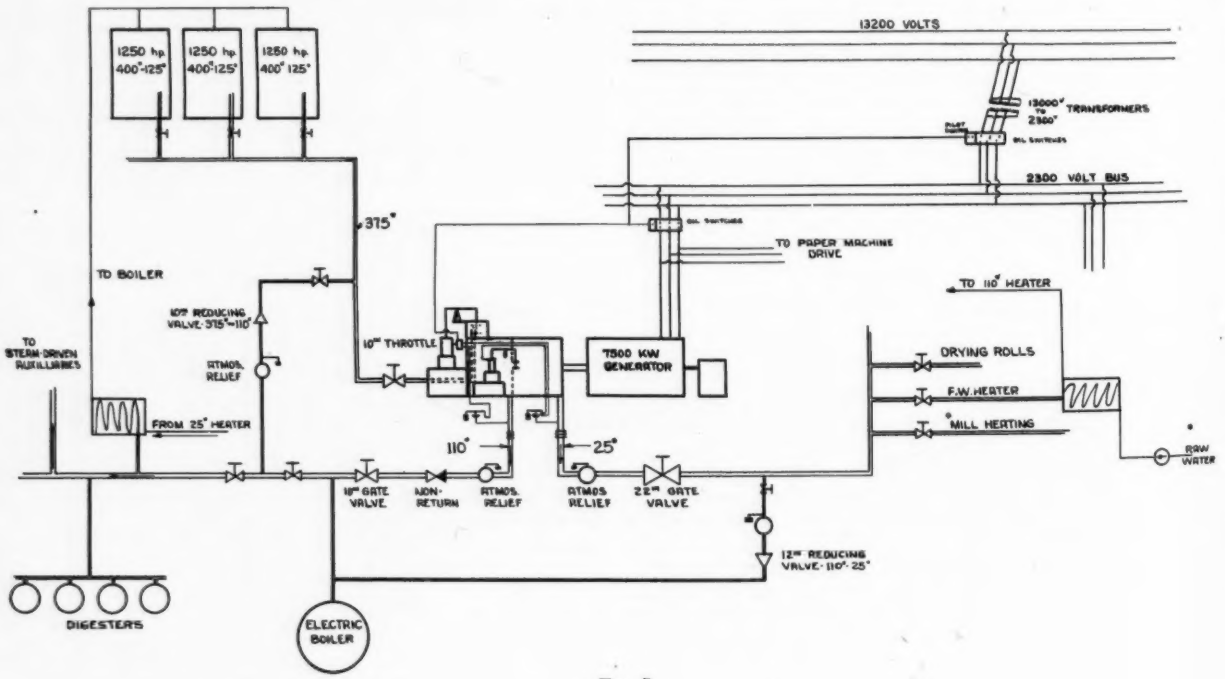


FIG. 7

one turbine on the system should be so equipped, and this must be of sufficient capacity to carry all of the load swings. Fig. 6 shows a turbine which controls the pressure at two bleeder points and also has a speed compensator to maintain the electrical system frequency.

In one paper mill we have three non-condensing turbines of 1000, 1500 and 3000 kw. capacity, operating at 385 pounds throttle pressure, and exhausting at 35 pounds pressure. When operating tied in with an outside power source these units take steam in accordance with the process steam demand under back pressure regulator control. Under this mode of operation the frequency is controlled by the outside line. At times when the electrical load is smaller, these units operate separate from the tie-line. The control is so arranged that any one unit may then operate under control of the constant speed compensator, the others operating under back pressure control. The unit operating with the speed compensator then controls the frequency of the system, and takes the load swings.

Emergency Frequency Control

Numerous installations have been made where steam is produced at 400 to 600 pounds, and is led to an automatic back-pressure bleeder turbine, where some of it is bled out at 100 to 200 pounds pressure and some exhausted at a lower pressure, say 10 to 50 pounds. Such a machine may have a pressure regulator at the exhaust and at the bleeder point, so that the power produced is determined by the demand for steam at the two pressures. Such a unit may be tied-in electrically with other machines in the same plant, but more frequently is tied-in with an outside line.

In case of failure of the outside power source, the bleeder turbine will be overloaded, and fail to maintain frequency, unless some means is used to prevent this. At one foreign installation where such a turbine bleeds to the digesters at 125 pounds and exhausts to the paper machine at 25 pounds, an electrical pilot switch is installed in the incoming power line so that in the event of failure of the outside power source, the turbine is not only disconnected from the board, but the circuit breakers on all but the essential load, viz., paper machine drive and its auxiliaries, are opened. This brings the total load within the capacity of the turbine. The pilot switch also energizes a solenoid on the turbine automatic back-pressure control changeover valve, which shifts the turbine from back-pressure bleeder control, floating on the line, to bleeder speed-responsive control, mantaining the system frequency on the essential load. This arrangement is shown in Fig. 7. After this changeover, the frequency is held within close limits by means of the governor speed compensator.

Load Control

Plants developing their own power frequently find it desirable to limit the power demand taken from a hydro unit or from an outside line. This may be done by arranging some turbine in their plant to operate in response to a load control device. At one plant such a load control, consisting of a watt-meter element, operates the speed changers on two of their four turbines to keep the load carried by the tie-line substantially constant. Any tendency for the tie-line to pick up load causes the load control to act on the turbine governor to increase the turbine load, thus reducing the tie-line load to the desired value.

In some cases this tie-line control by forestalling the establishment of higher peak-load demands, results in sufficient savings that the consideration of securing the by-product power entirely free is abundantly achieved.

Conclusion

The foregoing represents only some of the many ways in which turbines may be designed and applied to permit maximum economy in plant operation. Power is a very important item in the cost of production in the paper industry and its generation as a by-product obviously reduces the overall costs.

It has been the purpose of this paper to call attention to the possibilities that modern turbine design affords with the idea that a fuller appreciation of these possibilities will result in a wider utilization of them.

White Water Eccentricities*

By C. M. Baker[1]

Abstract

Although the development of white water utilization is an individual problem dependent on local conditions in every mill there are certain fundamental principles which may be considered to be generally applicable. The necessity for having whole-hearted cooperation on the part of mill employees is stressed and suggestions are made as to the procedure the mill management should follow to get this cooperation and to benefit by white water utilization in the paper mill.

Eccentricities in white water utilization and also in other industrial developments may often be traced to fallacious or eccentric ideas of personnel in the industry. "It may be all right for them, but it will not do for the kind of paper we are making," says Mr. A, when advised Mr. B is doing it, Mr. B, however, has this motto over his desk, *"When a man says a thing cannot be done, he is interrupted by someone doing it."*

It is a fact that unusual and unexpected problems arise in any industrial development. This is true in white water utilization. Such problems require careful study and consideration and often research to develop a satisfactory solution. It is the purpose of this paper to consider some of these unusual problems.

Principles of White Water Utilization

White water utilization consists essentially of the collection, recirculation and reuse of white water in the place of fresh water throughout the mill. The development of a closed system in normal operations is a possibility and realization in certain classifications of the industry. In others a completely closed system is important because of operating difficulties. The fundamental principles outlined below are based upon recirculation without the use of savealls except when necessary to recover or rèclaim stock from white water that must be wasted to the sewers.

FOURDRINIERS

The method outlined in Fig. 1 for fourdrinier machines is based upon separation of the white water into "A", the more concentrated, and "B", that from the showers. The system consists of:

1. Tank "A" to equalize the demand and supply beater

* Presented at the annual meeting of the Technical Association of the Pulp and Paper Industry, New York, N. Y., February 13-16, 1933. Contribution of the TAPPI Waste Committee.

[1] Member TAPPI, engineer, American Paper and Pulp Association, New York, N. Y.

make-up. This tank receives all white water from the wire tray, suction boxes, couch roll, etc.

2. Tank "B" into which all shower white water is collected and from which it is returned directly to the showers.

3. A separate couch pit from which the concentrated stock is dumped into the stock chest and the overflow included in the shower or beater white water.

4. Float controlled make-up inlets, fresh water into "B" and from "B" into "A" when "A" is nearly empty.

In normal operation no savealls are required but frequent changes in grade or color with six or eight hours beating complicate the system. If a blue is being run and yellow to follow it will be impossible to use the blue for yellow beater make-up, thus necessitating fresh water during this period. This will cause a building up and overflow of white water from System "A" from which the stock should be recovered by savealls. Slush stock from a pulp mill also builds up an excess but this, in some cases, may be returned to the pulp mill.

Yankee and Harper Fourdriniers

Fig. 2 illustrated adaptation of the above principles to Yankee and Harper fourdriniers where felt showers are required. The felt shower white water is collected separately, passed through a screen to remove threads and ravelings, returned to the felt showers, and supplies make-up in Tank "B" for the wire white water system. In this manner fresh water is taken in only through the felt shower system where the cleanest and best water is required.

Board Mills

The method outlined in Fig. 3 for board mills is likewise based upon separation of the white water into its various classes and recirculation into its individual units, thus obviating difficulties encountered in mixing colors in different grades of stock. The system consists of the following:

1. Tank "A" into which all the white water from the filler moulds is collected and returned to beaters and for dilution.

2. Tank "B" into which all felt shower water is collected and returned. This white water should be passed through a screen to remove threads and ravelings which otherwise may clog the showers. The tank is supplied with fresh water make-up through a float controlled inlet.

3. Tank "C" into which all white water from the liner moulds is collected and returned to beaters and for dilution.

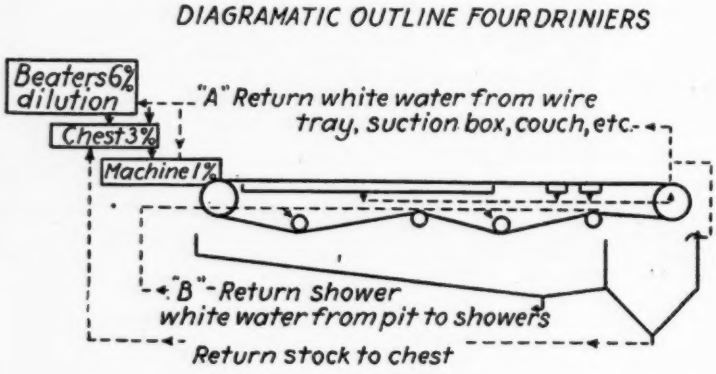
4. Both Tanks "A" and "C" are supplied with float control inlets from "B" for make-up. Fresh water is therefore always taken into the felt shower system from which make-up for the remainder of the system is supplied.

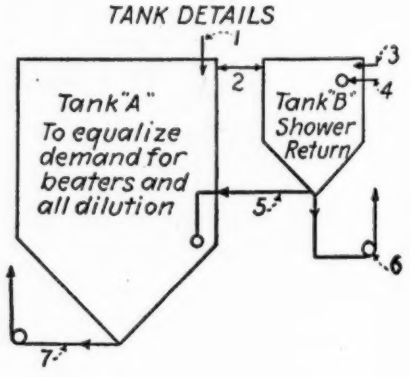
5. Mould showers may be supplied from their respective fan pumps or from Tanks "A" or "C". Readjustment of showers will probably be necessary so as to strike the surface at an acute angle as indicated in the sketches.

Slime Control

Slime control is absolutely necessary for successful white water utilization. Probably the greatest obstacle encountered in earlier efforts in white water utilization, has consisted of the accumulation of slime. Clogging of showers, improper cleaning of felts and wires with white water are due primarily to the accumulation of slime rather than to stock in the white water. White water containing 12 to 15 pounds of stock per 1000 gallons has been successfully used on the wires of fourdrinier operations on tissues and 2½ to 3 pounds per 1000 gallons is common.

The problem of slime control was a special subject of study by the writer during the summer in 1931, and is discussed in some detail in the bulletin "Slime Control" published by the American Paper and Pulp Association,


DIAGRAMATIC OUTLINE FOURDRINIERS
Beaters 6% dilution
Chest 3%
Machine 1%
"A" Return white water from wire tray, suction box, couch, etc.
"B" - Return shower white water from pit to showers
Return stock to chest



CAPACITY TANK "A"

		Formula	Example
LET	—Capacity of beater in pounds equal	W	1200
	Number of beaters dropped per 24 hours	N	14
	Time to fill and drop one beater	T	¾
	% consistency of stock to beater chest	P	3

THEN—Required capacity of tank "A" in cubic feet equal:

$$V = \frac{1.6 \times W}{P} - \frac{TWN}{15 \cdot P} = \frac{1.6 \times 1200}{3} - \frac{.75 \times 1200 \times 14}{15 \times 3} = 360 \text{ cu. ft.}$$

1—White water inlet to "A" from tray, suction box, etc.
2—Overflow connection between tanks or to pulp mill or to saveall.
3—Shower white water inlet from machine pit.
4—Float controlled fresh water inlet.
5—Float controlled inlet from tank "A" to "B".
6—White water pump from "B" to showers.
7—White water pump from "A" to beaters and for dilution.

Fig. 1.

to which reference is made for details upon this subject. From these studies it was concluded that effective slime control can be developed in any mill by the use of the ammonia-chlorine treatment.

Pulp Preparation

The use of white water in the pulp mill and in the preparation of the raw material in the beaters, as in the conditioning of rags, offers some complications. The following general principles are applicable.

1. All white water should be reclaimed, returned and reused as near its source as possible.
2. The counter current method should be used in washing stock, and fresh water applied only where necessary to wash the finished product.
3. Dilution of stock before deckers or thickeners should always be with white water. The better grades of white water from the paper mill may be used in washing deckers and thickeners, although fresh water is sometimes necessary. The most effective washing is secured by displacement of the polluted water in the stock with the wash water through showers upon the filter mat. The ultimate efficiency depends very little upon the quality of dilution water used. 3 to 6 gallons of wash water per pound of stock is usually required for this method of washing.
4. Return of white water from the paper mill is possible in many grades, but with the present tendency toward short runs with frequent changes in color this is often impossible. Concentration of the stock in the pulp mill through a screw press or thickener before taking it to the paper mill is therefore desirable. The white water from the pulp may then be retained in this unit, and a greater quantity of white water from the machines utilized in the paper mill.

Probably the most extravagant use of water in the industry is in the washing or conditioning of rags for fine papers. These rags are often washed 4 to 8 hours with fresh water, 50,000 gallons to 100,000 gallons per ton of product being common practice. This may be reduced to one-third or one-quarter the present demand by counter current washing. To illustrate: assume that there are four washers in operation, and that the total period of washing is four hours. The final hour of washing may be with fresh water and the effluent used for the third hour washing in another washer the effluent from which supplies water for the second hour from which the first hour washing of the raw rags in No. 1 washer is supplied. The writer knows of only one mill that is reusing any of its washwater in connection with the preparation of rag stock. This method of counter washing not only results in substantial saving of water but also in an appreciable reduction of stock losses.

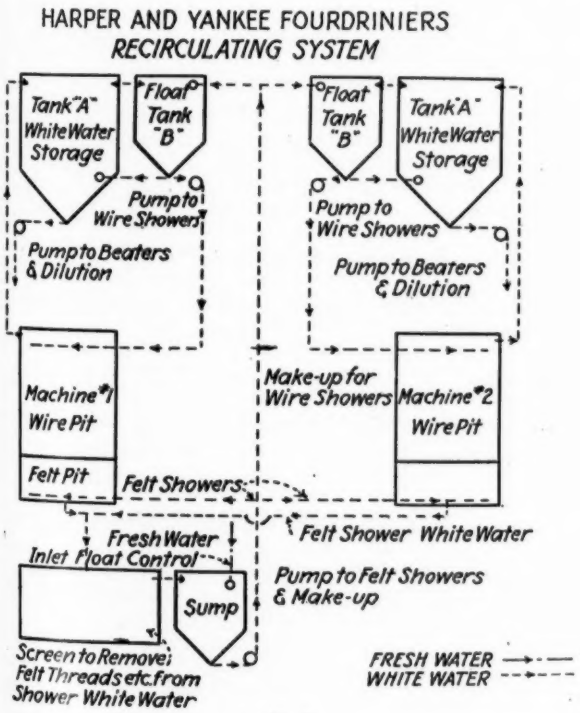


FIG. 2.

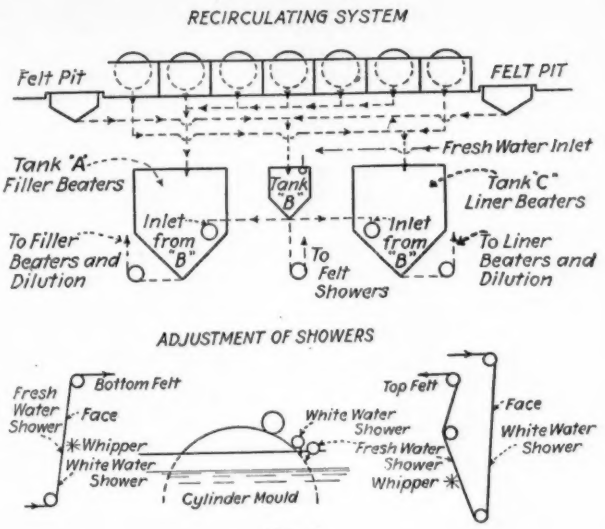


FIG. 3.

Beating

In many grades white water may be used without reconditioning in the beaters, both for make-up and dropping beaters. In other grades, however, difficulties are encountered. The reuses of white water increases the temperature and changes the chemical characteristics. This necessitates modification in all chemical processes used in the preparation of the stock.

It is generally contended that in the preparation of rag stock cold water is necessary for satisfactory beating or hydration. The writer was advised in one instance that a stock requiring four hours' beating with 50 deg. F. furnish water would require about eight hours with 80 deg. F. water. This contention resulted in conducting certain tests wherein one beater was furnished with 50 deg. F. water and another with 80 deg. F. water on the same stock. Two complete runs were made, and in each a better paper was produced with less power and less time of beating with the warm than with the cold water. It is possible, however, that some further reaction takes place in the beater chest. If so, cold water should be used in dropping beaters, and white water for furnish, but on the other hand, fresh water is sometimes desirable to secure and desired chemical reaction. This is a subject upon which more information is desirable.

Sizing

The recirculation and reuse of white water undoubtedly has a very material effect upon sizing. In the summer time the white water may so increase the temperature as to cause difficulty. In the beating test referred to above, how-

ever, it was observed that at the end of the beating period of eight hours substantially the same temperature prevailed in the beater regardless of the temperature of the furnish water. This would indicate that white water might be used for beater furnish, but that it may be desirable to use the colder water in dumping beaters, since this may affect the reaction in the chest. Application of the size late in the system tends to overcome the difficulty.

Necessitates Adjustment in Sizing

The reuse of white water lowers the pH which necessitates adjustments in sizing. This is particularly true with heavy body size. In some cases reduction in the amount of alum applied will overcome this difficulty, one mill advising that with white water only one-half the amount of alum is used that is required with fresh water. Where heavy sizing is required chemical adjustment of the white water is necessary. This has been accomplished by the use of sodium aluminate, soda ash, and lime, to compensate for the lower pH due to white water recirculation. This adjustment is an individual problem for every mill.

Foam

Recirculated white water increases foam difficulties. Frequently conditions in this respect may be improved by adjustments in structural details, although chemical conditioning of the white water may be necessary.

The tendency in the industry in conveying stock or white water from an upper to a lower tank is to let the liquid overflow from the upper onto the surface of the lower tank. This creates surface agitation and foam. A certain amount of agitation is necessary to keep the stock in suspension, but this may be accomplished without surface agitation by conveying the liquid from the upper to the lower tank through a controlled outlet near the bottom of the tank so that the discharge is under the surface, causing a stirring effect without surface agitation.

Chemical adjustment of the white water to facilitate sizing as pointed out above will also decrease foam troubles. Various foam killers on the market may be used with considerable success, but it is believed that adjustment of the basic conditions causing the trouble are first desirable.

Showers

High pressure showers with small openings so as to use a small quantity of water have been developed to economize in fresh water consumption. This type of shower, however, is not the most satisfactory with white water utilization. Larger openings at a lower pressure, 18 to 20 pounds per square inch, have been found more satisfactory.

Adjustment of the showers is extremely important, particularly in connection with white water utilization on cylinder moulds, board and other cylinder machines. The showers should be directed tangent rather than perpendicular to the surface. This applies not only to cylinder moulds but to felts, wires, and other surfaces washed with white water. The perpendicular shower tends to drive any stock into the wire while the tangent shower washes it off.

Only Two Cases of Failures Reported

In only two cases have failures been reported to the writer in using unclarified white water on cylinder mould and in both instances the stock consisted primarily of fresh ground wood. In one case a heavy fuzzy mat formed on the wire. The fibers were interlaced together but also appeared to be cemented together and to the wire. No serious difficulties have been reported with old paper stock or when a large percentage of sulphite is used with the ground wood. In one case where a careful study was being made of the problem the machine tenders reported that the one mould experimentally equipped with a tangent white water shower was the clearest mould on the machine notwithstanding the fact that all others were supplied with fresh water showers striking the mould, however, perpendicular to the surface.

The tendency in most mills is to use more showers than necessary. Fourdriniers are being operated upon news print, kraft, book and tissue without showers. A 6-cylinder board machine and a strawboard machine have been observed by the writer operating without showers. While this method is not advocated, it is believed that the number of showers can be materially reduced in most instances.

Physical Equipment

Circular, hopper bottom white water tanks so constructed and protected that there is little opportunity for accumulation of slime and dirt are desirable. If a rectangular tank is used the corners should be filled to facilitate cleaning and reduce the possibilities of dirt collection. Connections should be such as to stimulate circulation in the tank. Slime control was unsuccessful in one mill because the white water tank was 14 feet in diameter and only 4 feet deep with the inlet and outlet close together so that there was no circulation in the opposite side of the tank when slime accumulated and found its way into the system.

Pipe Lines Should Be Short As Possible

Pipe lines should be as short as possible with no dead ends. Their size should be small enough to produce a good velocity. While not necessary in all cases corrosion proof piping is desirable.

Procedure

Many troubles attributed to white water utilization may be traced to other causes. Anything done in a mill to change the normal routine usually meets opposition. If difficulties are encountered "the change" is usually "the cause". This necessitates selling the program to the mill personnel. The manager may be convinced that white water utilization is practical and feasible, but unless he secures the cooperation of his personnel a successful development is impossible.

Development to Overcome Difficulty

To overcome this difficulty a step by step development somewhat along the following lines is usually necessary.

1. Effective slime control should be provided first. The initial installation for this purpose, however, may need to be modified as the system becomes more completely closed.
2. Select one machine or one unit for the first development.
3. Provide initially for recirculation and reuse of the white water through the "A" system for beater make-up, dilution in dropping beaters, etc.
4. Extend utilization to the showers, developing one shower at a time.
5. Trace all difficulties encountered to their logical source. Many will be found due to other causes and methods of overcoming the others often will become apparent.
6. Time is required to successfully develop white water utilization; a year or more often being necessary to overcome all difficulties and complete all adjustments.
7. The problem is more difficult in the finer grades of paper but the returns are great, often amounting to 3 per cent or more of the mill production.
8. Savings amounting to $50 or $100 daily with a capital expenditure of $8000 or $10,000 and a nominal operation cost are quite common.

New York Trade Jottings

Maurice Hoopes, president of Finch, Pruyn & Co., Inc., paper manufacturers, of Glens Falls, N. Y., was a New York visitor last week.

* * *

David Don, formerly manager of the New York office of the A. P. W. Paper Company, is now a distributor of paper, specializing in towels, tissues and specialties, with offices at 156 West 21st street, New York.

* * *

Fletcher Paper Company announces the removal of its New York offices to 424 Madison Avenue, at the southwest corner of 49th street. The telephone number is Plaza 3-0500. Arthur N. Waring is the district representative.

* * *

J. H. Londergan, formerly vice-president and sales manager of Henry Lindermeyr & Sons, has joined the organization of the Blake-Butler Company, Inc., general paper merchants, with offices located at 225 Varick street, New York.

* * *

Arthur N. Waring, district representative of the Port Huron Sulphite and Paper Company, announces the removal of the district office of the company to 424 Madison Avenue, New York. The telephone number is Plaza 3-0500.

* * *

Joseph P. Heilbronn, of the J. P. Heilbronn Company, sailed from New York on Wednesday, March 22, aboard the steamer *Europa*, bound for Europe. After a short stay, Mr. Heilbronn will return from Europe to Manila, Philippine Islands.

* * *

A. R. Melker, of the A. R. Melker Company, 110 East 42nd street, New York, was the principal speaker at the regular weekly luncheon and meeting of the Eastern Division of the Salesmen's Association of the Paper Industry, held at the Hotel Roosevelt, New York, on Monday last. Mr. Melker gave an exceptionally interesting address on "The Use of Latex in the Beater," which was thoroughly enjoyed and appreciated by all present. There was an excellent attendance.

* * *

To better serve the paper mills in the East, the Appleton Machine Company, of Appleton, Wis., announces that it is now represented by the Nason Manufacturing Company, of 71 Fulton street, New York. All matters pertaining to the company's close coupled ball bearing type of Jordan's, Appleton Flat Screen, Machine room, finishing room, wet machine and wood room equipment, and also the Appleton line of Laboratory equipment, will receive prompt attention at this address. Charles F. Black, long associated with paper making and paper mill machinery, who also represents Penberthy drying equipment and Ross paper roll trucks, has been placed in charge of this department.

T. L. Dunbar Gets Patent on Pulp

[FROM OUR REGULAR CORRESPONDENT]

WATERTOWN, N. Y., March 27, 1933—A patent has been awarded to Thomas L. Dunbar, of this city, for his invention of a new process for the production of pulp and manufacturing rights have been assigned to the Chemipulp Process Company here. The invention is described as having a number of patentable features and application for the patent was made in 1932.

Speculation Regarding the Tariff

WASHINGTON, D. C., March 29, 1933—There is considerable conjecture here in connection with the ideas of President Roosevelt on the tariff.

At a recent press conference the President outlined his program for the remainder of the present session of Congress and in so doing made no mention whatever of tariff although, it may be recalled, that he spoke very vigorously on the subject during the recent campaign.

Inasmuch as the President apparently does not intend to take the matter up through Congress, it is being rumored here that after congress adjourns, which it is expected to do sometime in May, he will take up the question of reciprocal tariffs with the various nations. In the preliminary work he would not need any authorization from Congress. Of course when a treaty is actually reached, the Senate would have to ratify it. It is therefore taken for granted here now that if the President intends to do anything regarding the tariff at this time that it will be done in this way.

Thomassen Patent Suit Tried

The suit of Centrifugal Engineering and Patents Corporation against the Black-Clawson Company for alleged infringement of Thomassen patent No. 1,536,988 by the Black-Clawson Company's Miami Centrap pulp purifier was tried in the Federal court at Dayton, Ohio, during the week of March 6. As is customary, the attorneys for both sides are to submit briefs and arguments at a later date which has not yet been fixed by the court.

The Centrifugal Engineering and Patents Corporation is the owner of the so-called Erkensator patents under which it has granted licenses for the manufacture of centrifugal machines to the Tolhurst Machine Works of Troy, N. Y., the Bird Machine Company of South Walpole, Mass., and the Canadian Ingersoll-Rand Company, Limited of Montreal, Canada.

New Forest Products Structure Opened

APPLETON, Wis., March 27, 1933.—The laborious task of equipping the United States Forest Products Laboratory at Madison, Wis. has been completed, and the new structure costing nearly a million dollars is now in full operation in all departments. Completion of the work was celebrated with a public opening during which visitors were shown all departments of the laboratory in full operation. Among the processes demonstrated were the making of pulp and paper, rayon, cellophane and bakelite. More than 5,000 persons visited the structure and were escorted through various departments by guides. The opening was sponsored by the Madison Association of Commerce, and service clubs.

L. T. McCloskey Goes With Taylor & Co.

NORRISTOWN, Pa., March 27, 1933.—L. T. McCloskey has resigned as vice-president of Continental-Diamond Fibre Company, to become associated with Taylor & Co., Inc., of Norristown, manufacturers of vulcanized fiber and phenol fiber.

To Represent Hamilton & Sons

PHILADELPHIA, Pa., March 27, 1933.—W. C. Hamilton and Sons, manufacturers of fine papers, Miquon, Montgomery County, announce that they have appointed Donald G. Diggle as their Chicago representative, with offices at Room 446, 608 South Dearborn street.

ever, it was observed that at the end of the beating period of eight hours substantially the same temperature prevailed in the beater regardless of the temperature of the furnish water. This would indicate that white water might be used for beater furnish, but that it may be desirable to use the colder water in dumping beaters, since this may affect the reaction in the chest. Application of the size late in the system tends to overcome the difficulty.

Necessitates Adjustment in Sizing

The reuse of white water lowers the pH which necessitates adjustments in sizing. This is particularly true with heavy body size. In some cases reduction in the amount of alum applied will overcome this difficulty, one mill advising that with white water only one-half the amount of alum is used that is required with fresh water. Where heavy sizing is required chemical adjustment of the white water is necessary. This has been accomplished by the use of sodium aluminate, soda ash, and lime, to compensate for the lower pH due to white water recirculation. This adjustment is an individual problem for every mill.

Foam

Recirculated white water increases foam difficulties. Frequently conditions in this respect may be improved by adjustments in structural details, although chemical conditioning of the white water may be necessary.

The tendency in the industry in conveying stock or white water from an upper to a lower tank is to let the liquid overflow from the upper onto the surface of the lower tank. This creates surface agitation and foam. A certain amount of agitation is necessary to keep the stock in suspension, but this may be accomplished without surface agitation by conveying the liquid from the upper to the lower tank through a controlled outlet near the bottom of the tank so that the discharge is under the surface, causing a stirring effect without surface agitation.

Chemical adjustment of the white water to facilitate sizing as pointed out above will also decrease foam troubles. Various foam killers on the market may be used with considerable success, but it is believed that adjustment of the basic conditions causing the trouble are first desirable.

Showers

High pressure showers with small openings so as to use a small quantity of water have been developed to economize in fresh water consumption. This type of shower, however, is not the most satisfactory with white water utilization. Larger openings at a lower pressure, 18 to 20 pounds per square inch, have been found more satisfactory.

Adjustment of the showers is extremely important, particularly in connection with white water utilization on cylinder moulds, board and other cylinder machines. The showers should be directed tangent rather than perpendicular to the surface. This applies not only to cylinder moulds but to felts, wires, and other surfaces washed with white water. The perpendicular shower tends to drive any stock into the wire while the tangent shower washes it off.

Only Two Cases of Failures Reported

In only two cases have failures been reported to the writer in using unclarified white water on cylinder mould and in both instances the stock consisted primarily of fresh ground wood. In one case a heavy fuzzy mat formed on the wire. The fibers were interlaced together but also appeared to be cemented together and to the wire. No serious difficulties have been reported with old paper stock or when a large percentage of sulphite is used with the ground wood. In one case where a careful study was being made of the problem the machine tenders reported that the one mould experimentally equipped with a tangent white water shower was the clearest mould on the machine notwithstanding the fact that all others were supplied with fresh water showers striking the mould, however, perpendicular to the surface.

The tendency in most mills is to use more showers than necessary. Fourdriniers are being operated upon news print, kraft, book and tissue without showers. A 6-cylinder board machine and a strawboard machine have been observed by the writer operating without showers. While this method is not advocated, it is believed that the number of showers can be materially reduced in most instances.

Physical Equipment

Circular, hopper bottom white water tanks so constructed and protected that there is little opportunity for accumulation of slime and dirt are desirable. If a rectangular tank is used the corners should be filled to facilitate cleaning and reduce the possibilities of dirt collection. Connections should be such as to stimulate circulation in the tank. Slime control was unsuccessful in one mill because the white water tank was 14 feet in diameter and only 4 feet deep with the inlet and outlet close together so that there was no circulation in the opposite side of the tank when slime accumulated and found its way into the system.

Pipe Lines Should Be Short As Possible

Pipe lines should be as short as possible with no dead ends. Their size should be small enough to produce a good velocity. While not necessary in all cases corrosion proof piping is desirable.

Procedure

Many troubles attributed to white water utilization may be traced to other causes. Anything done in a mill to change the normal routine usually meets opposition. If difficulties are encountered "the change" is usually "the cause". This necessitates selling the program to the mill personnel. The manager may be convinced that white water utilization is practical and feasible, but unless he secures the cooperation of his personnel a successful development is impossible.

Development to Overcome Difficulty

To overcome this difficulty a step by step development somewhat along the following lines is usually necessary.

1. Effective slime control should be provided first. The initial installation for this purpose, however, may need to be modified as the system becomes more completely closed.
2. Select one machine or one unit for the first development.
3. Provide initially for recirculation and reuse of the white water through the "A" system for beater make-up, dilution in dropping beaters, etc.
4. Extend utilization to the showers, developing one shower at a time.
5. Trace all difficulties encountered to their logical source. Many will be found due to other causes and methods of overcoming the others often will become apparent.
6. Time is required to successfully develop white water utilization; a year or more often being necessary to overcome all difficulties and complete all adjustments.
7. The problem is more difficult in the finer grades of paper but the returns are great, often amounting to 3 per cent or more of the mill production.
8. Savings amounting to $50 or $100 daily with a capital expenditure of $8000 or $10,000 and a nominal operation cost are quite common.

New York Trade Jottings

Maurice Hoopes, president of Finch, Pruyn & Co., Inc., paper manufacturers, of Glens Falls, N. Y., was a New York visitor last week.

* * *

David Don, formerly manager of the New York office of the A. P. W. Paper Company, is now a distributor of paper, specializing in towels, tissues and specialties, with offices at 156 West 21st street, New York.

* * *

Fletcher Paper Company announces the removal of its New York offices to 424 Madison Avenue, at the southwest corner of 49th street. The telephone number is Plaza 3-0500. Arthur N. Waring is the district representative.

* * *

J. H. Londergan, formerly vice-president and sales manager of Henry Lindermeyr & Sons, has joined the organization of the Blake-Butler Company, Inc., general paper merchants, with offices located at 225 Varick street, New York.

* * *

Arthur N. Waring, district representative of the Port Huron Sulphite and Paper Company, announces the removal of the district office of the company to 424 Madison Avenue, New York. The telephone number is Plaza 3-0500.

* * *

Joseph P. Heilbronn, of the J. P. Heilbronn Company, sailed from New York on Wednesday, March 22, aboard the steamer *Europa*, bound for Europe. After a short stay, Mr. Heilbronn will return from Europe to Manila, Philippine Islands.

* * *

A. R. Melker, of the A. R. Melker Company, 110 East 42nd street, New York, was the principal speaker at the regular weekly luncheon and meeting of the Eastern Division of the Salesmen's Association of the Paper Industry, held at the Hotel Roosevelt, New York, on Monday last. Mr. Melker gave an exceptionally interesting address on "The Use of Latex in the Beater," which was thoroughly enjoyed and appreciated by all present. There was an excellent attendance.

* * *

To better serve the paper mills in the East, the Appleton Machine Company, of Appleton, Wis., announces that it is now represented by the Nason Manufacturing Company, of 71 Fulton street, New York. All matters pertaining to the company's close coupled ball bearing type of Jordan's, Appleton Flat Screen, Machine room, finishing room, wet machine and wood room equipment, and also the Appleton line of Laboratory equipment, will receive prompt attention at this address. Charles F. Black, long associated with paper making and paper mill machinery, who also represents Penberthy drying equipment and Ross paper roll trucks, has been placed in charge of this department.

T. L. Dunbar Gets Patent on Pulp

[FROM OUR REGULAR CORRESPONDENT]

WATERTOWN, N. Y., March 27, 1933—A patent has been awarded to Thomas L. Dunbar, of this city, for his invention of a new process for the production of pulp and manufacturing rights have been assigned to the Chemipulp Process Company here. The invention is described as having a number of patentable features and application for the patent was made in 1932.

Speculation Regarding the Tariff

WASHINGTON, D. C., March 29, 1933—There is considerable conjecture here in connection with the ideas of President Roosevelt on the tariff.

At a recent press conference the President outlined his program for the remainder of the present session of Congress and in so doing made no mention whatever of tariff although, it may be recalled, that he spoke very vigorously on the subject during the recent campaign.

Inasmuch as the President apparently does not intend to take the matter up through Congress, it is being rumored here that after congress adjourns, which it is expected to do sometime in May, he will take up the question of reciprocal tariffs with the various nations. In the preliminary work he would not need any authorization from Congress. Of course when a treaty is actually reached, the Senate would have to ratify it. It is therefore taken for granted here now that if the President intends to do anything regarding the tariff at this time that it will be done in this way.

Thomassen Patent Suit Tried

The suit of Centrifugal Engineering and Patents Corporation against the Black-Clawson Company for alleged infringement of Thomassen patent No. 1,536,988 by the Black-Clawson Company's Miami Centrap pulp purifier was tried in the Federal court at Dayton, Ohio, during the week of March 6. As is customary, the attorneys for both sides are to submit briefs and arguments at a later date which has not yet been fixed by the court.

The Centrifugal Engineering and Patents Corporation is the owner of the so-called Erkensator patents under which it has granted licenses for the manufacture of centrifugal machines to the Tolhurst Machine Works of Troy, N. Y., the Bird Machine Company of South Walpole, Mass., and the Canadian Ingersoll-Rand Company, Limited of Montreal, Canada.

New Forest Products Structure Opened

APPLETON, Wis., March 27, 1933.—The laborious task of equipping the United States Forest Products Laboratory at Madison, Wis. has been completed, and the new structure costing nearly a million dollars is now in full operation in all departments. Completion of the work was celebrated with a public opening during which visitors were shown all departments of the laboratory in full operation. Among the processes demonstrated were the making of pulp and paper, rayon, cellophane and bakelite. More than 5,000 persons visited the structure and were escorted through various departments by guides. The opening was sponsored by the Madison Association of Commerce, and service clubs.

L. T. McCloskey Goes With Taylor & Co.

NORRISTOWN, Pa., March 27, 1933.—L. T. McCloskey has resigned as vice-president of Continental-Diamond Fibre Company, to become associated with Taylor & Co., Inc., of Norristown, manufacturers of vulcanized fiber and phenol fiber.

To Represent Hamilton & Sons

PHILADELPHIA, Pa., March 27, 1933.—W. C. Hamilton and Sons, manufacturers of fine papers, Miquon, Montgomery County, announce that they have appointed Donald G. Diggle as their Chicago representative, with offices at Room 446, 608 South Dearborn street.

IMPORTS OF PAPER AND PAPER STOCK

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

New York Imports

WEEK ENDING MARCH 25, 1933

CIGARETTE PAPER

Standard Products Corp., Rochembeau, Havre, 39 cs.; American Tobacco Co., Rochambeau, Havre, 200 cs.; American Tobacco Co., Paris, Havre, 100 cs.; Van Oppen & Co., Exeter, Marseilles, 6 cs.; Max Spiegel & Son, Cypria, Barcelona, 5 cs.; Max Speigel & Son, A. Ballin, Hamburg, 3 cs.

WALL PAPER

Rohner Gehrig & Co., Majestic, Southampton, 1 cs.; Rohner Gehrig & Co., A. Ballin, Hamburg, 6 cs.

NEWS PRINT

W. H. Bell, Markland, Liverpool, N. S. 3969 rolls, Perkins & Co., Stuttgart, Bremen, 109 rolls, Jay Madden Corp., Stuttgart, Bremen, 129 rolls, Jay Madden Corp., Bergensfjord, Oslo, 594 rolls, Parsns & Whittemore Inc., A. Ballin Hamburg, 258 rolls.

PRINTING PAPER

P. C. Zuhlke, Pennland, Antwerp, 133 cs.; International F'd'g' Co., Boschdyk, Rotterdam, 29 cs.

WRAPPING PAPER

Blauvelt Wiley Paper Manfg. Co., Caledonia, Glasgow, 11 bls.

PACKING PAPER

Blauvelt Wiley Paper Mfg. Co., Boschdyk, Rotterdam, 20 bls.

FITER PAPER

H. Reeve Angel & Co. Inc., MMajestic, Southampton, 6 cs, 26 bls.; H. Reeves Angel & Co. Inc., Aurania, Southampton, 9 cs.; Blackman & Blackman, Exeter, Marseilles, 11 bls.; C. Schleicher & Schull Co., A. Ballin, Hamburg, 11 bls, 8 cs.; Rohner, Gehrig & Co., A. Ballin, Hamburg 10 cs.; A. Gilese & Son, Boschdyk, Rotterdam, 25 bls.

DRAWING PAPER

H. Reeve, Angel & Co. Inc., Aurania, Southampton, 2 cs.; Devoe & Reynolds Co., Aurania, Southampton, 6 cs.; Keuffel & Esser Co., Aurania, Southampton, 1 cs.

COLORED PAPER

D. C. Andrews & Co., Europa, Bremen, 2 cs.

Zellerback Paper Co., Taketoyo, Maru Kobe, 1 cs.; Jay Madden Corp., A. Ballin, Hamburg, 8 bbls, 1 cs.

TISSUE PAPER

Gevaert Co. of America, Pennland, Antwerp, 5 cs.; Boucher Cork Co., Europa, Bremen, 1 cs.; Globe Shipping Co., Europa, Bremen, 2 cs.

METAL COATED PAPER

K. Pauli Co., A. Ballin, Hamburg, 11 cs.; Globe Shipping Co., A. Ballin, Hamburg, 31 cs.

PHOTO PAPER

Davies Turner & Co., A. Ballin, Hamburg 2 cs.; American Express Co., A. Ballin, Hamburg, 15 cs.

DECALCOMANIA PAPER

B. F. Drakenfeld & Co., Caledonia, Liverpool, 4 cs (Duplex); B. F. Drakenfeld & Co., Caledonia, Liverpool, 2 cs. (Simplex); Sellers Transportation Co., Europa, Bremen, 22 cs.;

DESIGN PAPER

T. Wilson Co., Caledonia, Liverpool, 1 crate; Patchogue Plymouth Mills, Caledonia, Liverpool, 1 roll.

PARCHMENT PAPER

Phoenix Shipping Co., Stuttgart, Bremen, 2 cs.

ENVELOPES

Beckhard Simfred Co., Stuttgart, Bremen, 4 cs.

ARD BOARD

Corday Import Co., Paris, Havre, 3 3cs.; Coty Processing Co., Paris, Havre, 7 cs.; Framerican Importing Co., Exeter, Marseilles 9 cs.

MISCELLANEOUS PAPER

W. J. Byrnes, Stuttgart, Bremen, 3 cs.; Phoenix Shipping Co., Rochembeau, Havre, 1 cs.; Japan Paper Co., Rochambeau, Havre 2 cs.; Keller Dorian Paper Co., Rochambeau, Havre, 1 cs.; P. Puttman, Paris, Havre, 5 cs.; Keller Dorian Paper Co., Paris, Havre, 1 cs.; Tiffany & Co., Paris, Havre, 1 cs.; C. H. Powell, Paris, Havre, 3 cs.; G. W. Sheldon & Co., Paris, Havre, 6 cs.; Van Oppen & Co., Aurania, Southampton, 1 cs.; Steiner Paper Corp., Boschdyk, Rotterdam, 17 cs.

RAGS, BAGGING, etc.,

Banco Coml Italiane Trust Co., Savoi, Genoa, 46 bls. rags; M. Snedeker Corp., Caledonia, Liverpool, 47 bls. paper stock; Keene & Arkus, Cypria, Barcelona, 150 bys. rags.

OLD ROPE

International Purchsaing Co., Morro Castle, Havana, 36 coiols; International Purchasing Co., Cristobal Colon, Pasajes, 136 coils; Brown Bros. Harriman & Co., Cristobal Colon, Coruna, 28 coils; National City Bank, N. Y. City Bristol, 82 coils; Banco Coml Italiane Trust Co., Boschdyk, Rotterdam, 50 coils.

CASEIN

D. C. Andrews & Co., A. Ballin, Hamburg, 60 bags.

CHINA CLAY

Whitaker, Clark & Daniels, Caledonia, Liverpool, 3390 bags; L. A. Salomon & Bro., N. Y. City, Bristol, 240 bags, 70 casks.

GLUESTOCK

————, Stuttgart, Bremen, 25 bags hideglue; ——— ———, A. Ballin, Hamburg, 300 bags bone glue.

WOOD PULP

Castle & Oxerton, Inc., A. Ballin, Hamburg, 560 bls. woodpulp 112 tons; Castle & Overton, Inc., Boschdyk, Rotterdam, 956 bls. woodpulp; A. Giese & Co., Boschdyk, Rotterdam, 50 bls. woodpulp.

PHILADELPHIA IMPORTS

WEEK ENDING MARCH 25, 1933

F. Weber & Co., Savoia, Genoa, 15 cs. paper; Bank of N. Y. Trust Co., Cpria, Barcelona, 46 bls. rags; Keene & Arkus, Cypria, Barcelona, 85 bls. rags; 1st Nat'l. Bank of Boston, N. Y. City, Bristol, 53 coils old rope; G. A. Hennhaw & Son, N. Y. City, Bristol, 48 coils old rope; G. A. Hennhaw & Son, N. Y. City, Bristol, 438 bls. rags; Parsons & Wmittemore, Inc., Peryneas, ————5100 bls. wood pulp.

BALTIMORE IMPORTS

WEEK ENDING MARCH 25, 1933

Castle & Overton, Inc., Boschdyk, Rotterdam, 1578 bls. wood pulp.

BOSTON IMPORTS

WEEK ENDING MARCH 25, 1933

————, American Merchant, London, 24 bls. waste paper; ———American Merchant, London, 49 bls. rags; Crocker, Burbank Co., American Merchant, London, 201 bls. waste paper; Castle & Overton, Inc., Boschdyk, Rotterdam, 280 bls. wood pulp; Parsons & Whittemore, Inc., Peryneas, ————5345 bls. wood pulp.

GALVESTON IMPORTS

WEEK ENDING MARCH 25, 1933

Parsons & Whittemore, Inc., Grandon, ——15O bls sulphite.

NORFOLK IMPORTS

WEEK ENDING MARCH 25, 1933

Darmstadt, Scott & Courtney, Cypria, Barcelona, 104 bls, bagging; Castle & Overton, Inc., Cypria, Barcelona, 311 bls. tares; Carolina Bagging Co., Boschdyk, Rotterdam, 67 bls. bagging; Reliance Bagging Co., Boschdyk, Rotterdam, 91 bls. bagging; R. J. Reynolds Tobacco Co., Boschdyk, Rotterdam, 977 cs. cigarette paper; E. J. Keller Co. Inc., West Arrow, ———45 bls. rags; E. J. Keller Co. Inc., West Arrow, ———90 bls. bagging.

NEW ORLEANS IMPORTS

WEEK ENDING MARCH 25, 1933

Parsons & Wmittemore, Inc., Winston Salem, ——250 bls. sulphite.

Union Bag Gets Refunds

WASHINGTON, D. C., March 29, 1933—The Union Bag and Paper Corporation, New York City, has been awarded refunds by the Bureau of Internal Revenue for nearly $200,000 for overassessment of income taxes for several years as follows: For 1922 amounting to $103,524.12. For 1923 amounting to $67,414.48. For 1924 amounting to $22,236.09. For 1925 amounting to $6,237.72.

Superintendents To Review Progress

A review of the progress that has been made during the last year in the science of paper making is the object of the program being arranged for the fourteenth Annual Convention of the American Pulp and Paper Mill Superintendents Association. This meeting will be held June 8, 9 and 10 at Green Bay, Wis. with the cooperation of National President William H. Brydges of the Bedford Pulp and Paper Company, Big Island, Va., the details of the program are being arranged by Frank J. Timmerman of the Northern Paper Mills of Green Bay who is general chairman of the Convention Committee.

"It is our aim," said Mr. Timmerman, "to have a program that will appeal to the makers of all kinds of pulp and paper. We want to have every superintendent and mill manager in the country come to Green Bay with the conviction that this meeting is going to produce some new information of direct value to himself and his mill.

"Among the items already arranged for the program will be papers on lubrication, mechanical improvements, raw materials, white water, maintenance, winding, new materials and new uses for paper."

Mr. Timmerman added that careful consideration is also being given to entertainment features and that the visiting paper makers will find every provision made to make their stay at Green Bay an enjoyable one.

I. P. Mill at Piercefield Resumes

[FROM OUR REGULAR CORRESPONDENT]

PIERCEFIELD, N. Y., March 27, 1933—The local branch of the International Paper Company has resumed operations in the sulphite department after being closed several weeks ago. The resumption of work came as a surprise as it had been predicted that the plant would be abandoned and the equipment shipped to other divisions. About 75 workers have been recalled and it is expected that operations will be continued steadily for some time. It is understood that the present schedules will gradually be increased now that the dismantling rumors have been banished and a return to previous capacity operations is expected in the near future.

Plans of the company are said to call for a probable change in the brand of products turned out here in the near future. The mill has specialized for some time in the manufacture of a high quality sulphite and bond paper but at this time the sulphite being manufactured is being transported to other divisions to undergo the finishing processes.

At the Fort Edward branch of the company plans are under way for the construction of a huge concrete stock tank which will be the largest of its kind in this section.

How New York Mills Met Pay Rolls

[FROM OUR REGULAR CORRESPONDENT]

CARTHAGE, N. Y., March 27, 1933—The recent government restrictions caused some inconvenience to local mills although operations were not interrupted. Virtually all of the concerns met their payrolls by giving their employees thirty per cent cash and the remainder in checks. Among the firms observing this action were the National Paper Products Company, Island Paper Company, Adirondack Core and Plug Company, Carthage Papermakers Inc. and the Braman Manufacturing Company. A plan for using scrip was contemplated by the National Paper Products Company, but it is understood that this was abandoned upon the advice of the main office. The company has a weekly payroll amounting to about $2,500 and the local officials had virtually decided to use the scrip plan.

New York Market Review

Office of the PAPER TRADE JOURNAL,
Wednesday, March 29, 1933.

Conditions in the local paper market continue to improve. Demand for the various standard grades of paper is gradually expanding. Sales forces of the leading paper houses are more optimistic than for some time past. There are numerous inquiries around, many of which should materialize into good orders. Prices are decidedly firmer.

The position of the news print paper market is practically unchanged. According to the News Print Service Bureau, the total North American production for February was 211,301 tons. Stocks of news print paper at the mills at the end of February amounted to 77,878 tons, a slight increase, due mainly to accumulation of tonnage to be shipped later by water.

Demand for the various grades of paper board is fairly persistent. Box board quotations advanced $2.50 per ton. The fine paper market is firmer. Increased prices are looked for on book papers. Tissues are moving in good volume. The coarse paper market is displaying greater strength and kraft wrapping paper prices are $2.50 per ton higher.

Mechanical Pulp

Steadiness prevails in the ground wood pulp market. Demand is fairly active, and with production in this country and abroad curtailed, the industry is in a sound statistical position. Prices are firm, in most instances. No. 1 imported moist mechanical pulp is now quoted at from $18.50 to $20.00 per ton, and dry at from $19.50 to $21.00 per ton, on dock, Atlantic ports.

Chemical Pulp

No radical changes were reported in the chemical pulp market during the past week. There are a number of inquiries around for future requirements, however, and the outlook for the future is promising. Contract shipments of both domestic and imported chemical pulp are going forward in moderate volume. Prices are steady and unaltered.

Old Rope and Bagging

Most of the business transacted in the old rope market was along routine lines. Demand for both domestic and imported old manila rope is light. Small mixed rope is moving slowly. Old rope quotations are generally unchanged. The bagging market is fairly active. Although scrap bagging is still maintaining a quiet tone, gunny bagging and also roofing bagging are going forward in fairly good volume.

Rags

The domestic rag market continues to mark time. Mill interest in the various grades of cotton cuttings is lacking, with some exceptions. Demand for No. 1 white shirt cuttings is satisfactory, while roofing rags are moving more freely than of late. Prices are strictly nominal. The imported rag market continues dull, with quotations irregular.

Waste Paper

Board mill request for the lower grades of paper stock is excellent. With offerings limited, prices are becoming firmer. Strictly folded news is now quoted at from .43 to .48 and No. 1 mixed paper at from .25 to .30, f. o. b. New York. Most of the better grades of waste paper are steady to firm, including hard and soft white shavings, and book stock.

Twine

Some improvement was noticed in the local twine market during the past week. With the approach of Easter and improvement in the wrapping paper situation, demand for the various grades is gradually expanding. Inquiries for future account are fairly numerous. Despite the usual keen competition, prices have been to a great extent well maintained.

PHILADELPHIA MARKET BUOYANT

(*Continued from page 15*)

he found collections very much improved and the outlook was very much brighter. The new product—McDowell's Anti-Rancid Green—that they had been working on for some months is now perfected and meets all the requirements exacted by the Bureau of Agriculture, and has been used and tried out in different products for the prevention of rancidity and spoilage of foods.

One of the active coarse paper dealers reports that within the past two days he has received as many letters from as many mills, one of which stated it would still accept orders at the January quotations, but the other two intimate that a slight advance could shortly be expected.

The local kraft market probably has less amount of stock on hand than for many months past and it is reported that virtually no shipments have come from the South for many weeks, a condition which the local trade believes largely to have been due to the bank holiday.

Newton Falls Paper Co. on Full Time

[FROM OUR REGULAR CORRESPONDENT]

NEWTON FALLS, N. Y., March 27—Increased operations have been placed in effect by the Newton Falls Paper Company which is now running seven days weekly on a twenty-four hour daily basis. The entire force is being steadily employed turning out book paper for the owners of the mill. Resumption of capacity operations has been welcomed by local business men.

The mill is controlled by a large publishing concern which uses it as the source of its supply of paper. It was purchased by the new owners several years ago and then remodeled to provide facilities for the production of book paper. Previous to that time it was used for the manufacture of high grade colored specialties.

CHEMICAL AND MECHANICAL PULP

BLEACHED SULPHITE

Kellner-Partington Paper Pulp Co., Ltd.
Sarpsborg, Norway—Edsvalla, Sweden
Hallein and Villach, Austria

UNBLEACHED SULPHITE

Bergvik och Ala Nya Aktiebolag, Söderhamn, Sweden
Cellulosefabriks A.-G., Bratislava, Czecho-Slovakei
Aktieselskabet Greaker Cellulosefabrik, Greaker, Norway
Svanö Aktiebolag, Svanö, Sweden

KRAFT PULP

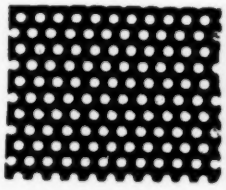
Bergvik och Ala Nya Aktiebolag, Söderhamn, Sweden
Kalix Träindustri Aktiebolag, Vanafjärden, Sweden
Munksunds Aktiebolag, Munksund, Sweden
Nensjö Cellulosa A.-B., Sprängsviken, Sweden

Selling Agents

J. ANDERSEN & CO., 21 East 40th Street, New York

Perforated Metal Screens

For Pulp and Paper Mills



STEEL, COPPER, BRASS, BRONZE, MONEL METAL and other Alloys punched for Centrifugal and Rotary Screens, Pulp Washers, Drainer Bottoms, Filter Plates, etc.

".065" Round

CHARLES MUNDT & SONS

63-65 FAIRMONT AVE. JERSEY CITY, N. J.

Meyers Regulators DO Mesco Regulate

STOCK CONSISTENCY

Merritt Engineering & Sales Co., Inc.

Lockport, N. Y.

MARCH REFERENCE—HOBERG PAPER & FIBRE CO.

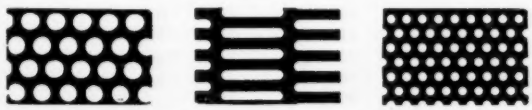
Experience has taught users of paper-making chemicals that P M C products are uniform and reliable. These qualities are insured by quantity production, by control of raw materials, and by specializing in the manufacture of chemicals for the paper manufacturer.

PMC

SUPERIOR
ROSIN SIZE
SATIN WHITE
INDUSTRIAL
CHEMICALS

PAPER MAKERS CHEMICAL CORPORATION
KALAMAZOO, MICHIGAN
PLANTS IN ALL LARGE PAPER MAKING AREAS

PULP AND PAPER MILL SCREENS



EVERY TYPE OF PERFORATED METAL

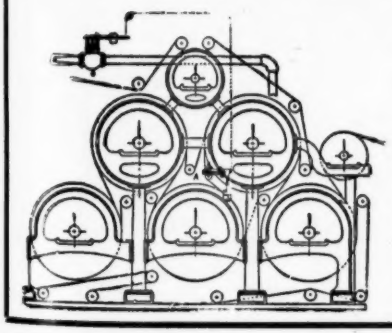
STAINLESS STEEL, MONEL, CHEMICAL RESISTING ALLOYS OR ANY METAL PERFORATED AS DESIRED

EXCELLENCE OF PRODUCT LOW PRICES

THE HARRINGTON & KING PERFORATING CO.

5652 FILLMORE ST., CHICAGO NEW YORK, 114 LIBERTY ST.

The Pickles Drying Regulator



WE ARE SAFE IN OUR PROPOSITION

YOU'LL MAKE NO MISTAKE IN ACCEPTING IT

Pickles Drying Regulator

will do everything we claim for it and more. The test costs you nothing until you are satisfied. Many mills tried one and now have every machine equipped. Write for list of users and other information.

W. F. PICKLES **Buckland, Conn.**

Miscellaneous Markets

Office of the PAPER TRADE JOURNAL,
Wednesday, March 29, 1933.

BLANC FIXE.—Steadiness prevails in the blanc fixe market. Prices are holding to schedule, in most instances. The pulp is quoted at from $42.50 to $45.00 per ton, in bulk; while the powder is selling at from 3½ cents to 3¾ cents per pound, in barrels, at works.

BLEACHING POWDER.—The position of the bleaching powder market is practically unchanged. Shipments against contract are moving in moderate volume. Prices are fairly steady. Bleaching powder is quoted at from $1.75 to $2.00 per 100 pounds, in drums, at works.

CASEIN.—Demand for casein is better. Domestic standard ground is quoted at from 7½ to 8 cents and finely ground at from 8½ to 9 cents per pound. Argentine standard ground is selling at 9 cents and finely ground at 9½ cents per pound, all in bags, car lot quantities.

CAUSTIC SODA.—The caustic soda market is only moderately active. Contract shipments are moving slowly. Solid caustic soda is quoted at from $2.55 to $2.60; while the flake and the ground are selling at from $2.95 to $3.00 per 100 pounds, in large drums, at works.

CHINA CLAY.—Conditions in the china clay market are fairly satisfactory. The contract movement is seasonal. Imported china clay is still quoted at from $10 to $15 per ton, ship side; while domestic paper making clay is selling at from $5 to $12 per ton, at mine.

CHLORINE.—The chlorine market is displaying a fairly strong undertone. Supplies are moving into consumption in better volume. Prices are steady. Chlorine is quoted at $1.75 per 100 pounds, in tanks, or multi-unit cars, in ton lots, or over, at works.

ROSIN.—Business in the rosin market is spotty. The grades of gum rosin used in the paper mills are quoted at from $3.60 to $4.00 per 280 pounds, in barrels, at works; while wood rosin is selling at $2.75 per 280 pounds, in barrels, at southern shipping points.

SALT CAKE.—The salt cake market is practically marking time. Prices remain unchanged. Salt cake is quoted at from $12.50 to $13.00; chrome salt cake at from $11.50 to $12.50 per ton, at works. Imported salt cake is selling at from $12.50 to $13.00 per ton, on dock.

SODA ASH.—Trading in the soda ash market is fairly active. The contract movement is moderately heavy. Prices remain unaltered. Quotations on soda ash, in car lots, at works, per 100 pounds, are as follows: in bulk, $1.05; in bags, $1.30; and in barrels, $1.43.

STARCH.—The starch market is showing some improvement, due mainly to the firmer tone of basic grain. Prices remain unchanged. Special paper making starch is quoted at $2.19 per 100 pounds, in bags; and at $2.46 per 100 pounds, in barrels, at works.

SULPHATE OF ALUMINA.—Paper mill demand for sulphate of alumina is light at present. Prices are holding to schedule. Commercial grades are quoted at from $1.25 to $1.46; while iron free is selling at from $1.90 to $2.05 per 100 pounds, in barrels, at works.

SULPHUR.—The sulphur market continues steady. Sulphur is quoted at $18 per long ton, on orders of 1,000 tons, or over, on yearly contracts; and at $20 per ton on any smaller quantity over that period. On spot and near by car loads, the quotation is $21 per ton.

TALC.—Most of the business transacted in the talc market during the past week was routine. Prices remain unchanged. Domestic talc is quoted at from $16 to $18 per ton, in bulk, at eastern mines; while imported talc is selling at from $18 to $22 per ton, ship side.

Market Quotations

Paper

(F. o. b. Mill)

Ledgers	6.50	@	38.00
Bonds	4.75	@	53.25
Index	6.00	@	12.00
Writings—			
Extra Superfine	6.50	@	15.00
Superfine	6.25	@	14.75
Tub sized	4.50	@	7.00
Engine sized	4.00	@	5.00
Book, Cased—			
S. & S. C.	4.25	@	5.00
M. F.	3.75	@	4.25
Coated and Enamel	5.00	@	9.00
Lithograph	5.00	@	9.00
Tissues—Per Ream—			
White No. 1	.50	@	.70
White No. 2	.45	@	.60
Anti-Tarnish M. G. only	.65	@	.70
Colored	.70	@	.90
Kraft	.65	@	.70
Manila	.55	@	.60
Manila—			
No. 1 Jute	9.00	@	9.25
No. 2 Jute	7.75	@	8.50
No. 1 Wood	4.00	@	5.25
No. 2 Wood	3.50	@	4.00
Butchers	3.37½	@	—
Fibre Papers—			
No. 1 Fibre	4.25	@	5.50
No. 2 Fibre	4.00	@	4.75
Common Bogus	1.50	@	3.00
Screenings	2.00	@	3.00
Card Middles	4.00	@	5.00
Glassine—			
Bleached, basis 25 lbs., No. 1	.09¼	@	—
No. 2	.11¼	@	—
Bleached, basis 20 lbs.	.11¼	@	—

(Delivered New York)

News, per ton—			
Roll, contract	45.00	@	—
Rolls, spot	45.00	@	—
Sheets	50.00	@	—
Side Runs	30.00	@	35.00
Kraft—			
No. 1 Domestic	4.50	@	4.75
No. 2 Domestic	2.75	@	3.00
Southern	2.62½	@	3.00
Imported	2.75	@	3.50
Boards—per ton—			
News	32.50	@	35.00
Straw	29.50	@	31.50
Chip	30.00	@	32.50
Binders' Boards	62.00	@	70.00
Kraft Liner	40.00	@	45.00
Standard 85 Test Jute Liner	27.75	@	30.00
Sgl. Mla. Ll. Chip	37.50	@	40.00

(F. o. b. Mill)

Wood Pulp Boards	70.00	@	80.00

Mechanical Pulp

(On Dock, Atlantic Ports)

No. 1 Imported			
Moist	18.50	@	20.00
Dry	19.50	@	21.00

(F. o. b. Mill)

No. 1 Domestic and Canadian	14.00	@	22.00

Chemical Pulp

(On Dock, Atlantic Ports)

Sulphite (Imported)—			
Bleached	1.80	@	2.25
Easy Bleaching	1.60	@	1.75
No. 1 strong unbleached	1.35	@	1.60
Mitscherlich unbleached	1.60	@	1.75
No. 4 strong unbleached	1.25	@	1.35
No. 1 Kraft	1.25	@	1.40
No. 2 Kraft	1.10	@	1.15
Sulphate—			
Bleached	1.85	@	2.15

(F. o. b. Pulp Mill)

Sulphite (Domestic and Canadian)—			
Bleached	1.75	@	3.75
Easy Bleaching	1.75	@	1.90
News	1.40	@	1.65
Mitscherlich unbleached	2.00	@	2.25
Kraft (Domestic)	1.25	@	2.75

(Delivered Paper Mills)

Soda Bleached	2.00	@	—

Domestic Rags

New Rags

(Prices to Mill f. o. b. N. Y.)

Shirt Cuttings—			
New White, No. 1	3.80	@	4.00
New White, No. 2	3.00	@	3.25
Silesias No. 1	3.25	@	4.00
New Unbleached	5.25	@	5.75
New Soft Blacks	2.75	@	3.00
Blue Overall	3.00	@	3.50
Fancy	1.25	@	1.50
Washables	1.00	@	1.25
Mixed Khaki Cuttings	2.50	@	3.00
Pink Corset Cuttings	2.75	@	3.25
O. D. Khaki Cuttings	3.00	@	3.25
Men's Corduroy	1.00	@	1.25
New Mixed Blacks	2.25	@	2.50

Old Rags

White, No. 1—			
Repacked	3.00	@	3.50
Miscellaneous	2.00	@	2.25
White, No. 2—			
Repacked	1.75	@	2.00
Miscellaneous	1.50	@	1.75
Thirds and Blues—			
Repacked	1.50	@	1.75
Miscellaneous	1.00	@	1.25
Black Stockings	2.00	@	2.25
Roofing Rags—			
No. 1	.53	@	.58
No. 2	.48	@	.53
No. 3	.43	@	.48
No. 4	.38	@	.43
No. 5A	.33	@	.38

Foreign Rags

New Rags

New Dark Cuttings	1.30	@	1.40
New Mixed Cuttings	1.50	@	1.60
New Light Silesias	3.00	@	3.25
Light Flannelettes	2.50	@	2.75
Unbleached Cuttings	4.50	@	5.00
New White Cuttings	4.00	@	4.25
New Light Oxfords	3.00	@	3.25
New Light Prints	1.85	@	2.25

Old Rags

No. 1 White Linens	5.25	@	5.50
No. 2 White Linens	4.50	@	4.75
No. 3 White Linens	3.25	@	3.75
No. 4 White Linens	1.75	@	2.25
No. 1 White Cotton	3.50	@	3.75
No. 2 White Cotton	2.75	@	3.25
No. 3 White Cotton	2.25	@	2.50
No. 4 White Cotton	1.40	@	1.50
Extra Light Prints	1.80	@	2.00
Ord. Light Prints	1.60	@	1.75
Med. Light Prints	1.40	@	1.55
Dutch Blue Cottons	1.35	@	1.40
French Blue Linens	1.80	@	1.90
German Blue Linens	1.70	@	1.80
German Blue Cottons	1.20	@	1.25
Checks and Blues	1.25	@	1.30
Lindsay Garments	.75	@	.80
Dark Cottons	.70	@	.75
Old Shopperies	.55	@	.60
New Shopperies	.60	@	.65
French Blues	1.25	@	1.30

Old Rope and Bagging

(Prices to Mill f. o. b. N. Y.)

Gunny No. 1—			
Foreign	.90	@	1.00
Domestic	1.00	@	1.10
Wool Tares, light	.70	@	.80
Wool Tares, heavy	.70	@	.80
Bright Bagging	.70	@	.75
Small Mixed Rope	.59	@	.60
Manila Rope—			
Foreign	1.35	@	1.40
Domestic	1.40	@	1.50
New Burlap Cut	1.00	@	1.50
Hessian Jute Threads—			
Foreign	2.60	@	2.75
Domestic	2.80	@	3.00

Old Waste Papers

(F. o. b. New York)

Shavings—			
White Envelope Cuttings	2.00	@	2.10
Ordinary Hard White No. 1	1.70	@	1.80
Hard White No. 2	1.50	@	1.60
Soft White No. 1	1.45	@	1.55
Flat Stock—			
Stitchless	.55	@	.65
Overissue Mag	.55	@	.65
Solid Flat Book	.50	@	.55
Crumpled No. 1	.40	@	.45
Solid Book Ledger	1.50	@	1.75
Ledger Stock	.45	@	.55
New B. B. Chips	.20	@	.25
Manilas—			
New Env. Cut	1.35	@	1.45
New Cuttings	1.00	@	1.05
Extra No. 1 old	.80	@	.90
Print	.35	@	.40
Bogus Wrapper	.30	@	.35
Container	.25	@	.30
Old Kraft Machine—			
Compressed bales	.65	@	.75
News—			
No. 1 White News	1.00	@	1.05
Strictly Overissue	.50	@	.55
Strictly Folded	.43	@	.48
No. 1 Mixed Paper	.25	@	.30

H·T
BRAND

COATING CLAY · HIGHEST GRADE FILLING CLAY

The Clay of Uniformity

AMERICAN MADE
for AMERICAN TRADE

Edgar Clays are the Result of more than fifty years' experience in washing clay — used by Leading Paper Mills.

Also Manufacturers of **KLONDYKE BRAND FILLER CLAYS**

EDGAR BROTHERS COMPANY
50 CHURCH STREET NEW YORK CITY

BLEACH TANK WHITE

Formerly known as DAIRY WHITE.
BLEACH TANK WHITE will actually protect metals from corrosion and make unnecessary the immediate replacement of metal parts which may be causing poor quality pulp. Acid and alkali proof.
Dries by evaporation in a few minutes, can be applied over damp surfaces and becomes very glossy when dry.

Consult us about our other Bituminous products to be used around the mill.

Send for free sample can—sufficient for coating good-size surface.

SLEIGHT BITUMINOUS PRODUCTS COMPANY
BALTIMORE, MARYLAND

GIANT

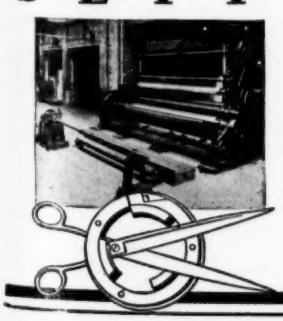
RAGS — BURLAP
BAGGING — ROPE
JUTE BUTTS, MAGAZINES, CATALOGS OLD PAPERS, THREAD WASTE AND ALL GRADES OF RAGS CUT QUICKLY AND EFFICIENTLY WITH THE

TAYLOR, STILES & COMPANY TRADE MARK GIANT REG. U.S. PAT. OFF. RIEGELSVILLE, N.J. U.S.A.

This is the GIANT 2A CUTTER WITH A CAPACITY OF 3000 lbs. PER HOUR
GIANT RAG CUTTERS HAVE CAPACITIES OF FROM 1 to 5 tons per hour.

THE STANDARD OF THE WORLD FOR 60 YEARS
TAYLOR, STILES & COMPANY
RIEGELSVILLE, N. J.
CANADIAN REPRESENTATIVES
Waterous Engine Works Company, Ltd., Brantford, Ont., Canada
SOLE AGENTS FOR EUROPE
A. J. Marx, 133-139 Finsbury Pavement, London, E. C.

LANGSTON SLITTERS



FOR clean, square-edged, tightly wound rolls, Langston Slitters are unequaled. The Shear-Cut parts the paper cleanly—instead of *crushing* it. Ask for details.

Samuel M. Langston Co., Camden, N. J.

UNION SCREEN PLATE COMPANY

Fitchburg, Mass., U. S. A. Lennoxville, P. Q., Canada

UNION BRONZE SCREEN PLATES FOR FLAT SCREENS

Old Plates Reclosed and Re-cut to Accurate Gauge.
Rolled Phosphor Bronze and Copper Plates for Rotary Screens

Sole Manufacturers of the
UNION-WITHAM SCREEN PLATE VAT AND FASTENER

Twines

(F. o. b. Mill)

Cotton—			
B. C., 18 basis	.30	@	.32
No. 1	.20	@	.22
No. 2	.19	@	.20
No. 3	.17	@	.18
A. Italian, 18 basis	.36	@	.37
Finished Jute—			
Dark, 18 basis	.18	@	.20
Light, 18 basis	.20	@	.22
Jute Wrapping, 3-6 Ply—			
No. 1	.15½	@	.16½
No. 2	.11¾	@	.12¾
Jute Rope—			
4-ply and larger	.08¼	@	.10¾
Fine Tube Rope—			
4-ply	.12¼	@	.12¾
3-ply	.13¼	@	.13¾
2-ply	.14¼	@	.14¾
Paper Makers Twine Balls	.09¼	@	.11¼
Box Twine, 2-3 ply	.11¼	@	.12¼
Jute Rope	.09	@	.10
White Hemp	.12¼	@	.15¾
Java Sisal—			
No. 1 Basis	.10	@	—
No. 2 Basis	.09	@	—
New Zealand Sisal	.10	@	—
Sisal Lath Yarn—			
No. 1	.12	@	.14
No. 2	.10	@	.12
Manila Twine	.23	@	.28

CHICAGO

Paper

(F. o. b. Mill)

Rag Bond	.30	@	.53¼
Water Marked Sulphite Bond	.09	@	.12
Sulphite Bond	.04	@	.11
Superfine Writing	.18	@	.24
No. 1 Fine Writing	.14	@	.18
No. 2 Fine Writing	.12	@	.14
No. 3 Fine Writing	.07	@	.18
No. 1 M. F. Book	.06½	@	.07¼
No. 2 M. F. Book	.05¼	@	.06¼
No. 1 S.&S.C. Book	.06¾	@	.07¾
No. 2 S.&S.C. Book	.05¾	@	.06½
Coated Book	.07½	@	.12
Coated Label	.07½	@	.10
No. 1 Manila	.04¼	@	.05¾
No. 1 Fibre	.04¾	@	.05¼
No. 2 Manila	.04¼	@	.04¾
Butcher's Manila	.03¼	@	.03¾
No. 1 Kraft	3.50	@	4.50
Southern Kraft	2.62½	@	—
No. 2 Kraft	2.62½	@	—
Wood Tag Boards	.04¼	@	.06¼
Sulphite Screenings	.03	@	.03¾
Manila Tissue	.07	@	.07½
White Tissue	.07¼	@	.07½

(Delivered Central Territory)

News, per ton—			
Rolls, contract	45.00	@	—
Sheets	50.00	@	—
Boards, per ton—			
Plain Chip	27.50	@	—
Solid News	30.00	@	—
Manila Lined Chip	37.50	@	—
Patent coated	47.50	@	—
Container Lined—			
85 Test	50.00	@	55.00
100 Test	55.00	@	60.00

Old Papers

(F. o. b. Chicago)

Shavings—			
No. 1 White Envelope cuttings	1.50	@	1.55
No. 1 Hard White	1.40	@	1.45
No. 1 Soft White	1.00	@	1.10
Ledger & Writings	.55	@	.60
Solid Books	.45	@	.50
Blanks	1.00	@	1.05
Kraffs	.70	@	.80
New Kraft Cuts	1.15	@	1.25
Manila Env. Cuts	1.25	@	1.30
Ex. No 1 Manila	.90	@	1.00
Print Manila	.30	@	.40
Overissue News	.45	@	.50
Old Newspapers—			
No. 1	.45	@	.50
Mixed Papers—			
No. 1	.25	@	.30
Roofing Stocks—			
No. 1	30.00	@	—
No. 2	28.00	@	—

PHILADELPHIA

Paper

(F. o. b. Mill)

Bonds	.04	@	.40
Ledgers	.06	@	.40
Writings—			
Superfine	.10	@	.18
Extra Fine	.15	@	.26
Fine	.15	@	.26
Fine, No. 2	.10	@	.25
Fine No. 3	.05½	@	.18
Book, M. F.	.04¾	@	.07
Book, S. S. & C.	.05	@	.07½
Book, Coated	.06	@	.16
Coated Lithograph	.06	@	.11
Label	.07	@	.11
No. 1 Jute Manila	.06	@	.09
Manila Sul., No. 1	.03	@	.05
Manila No. 2	.03	@	.04
No. 1 Kraft	.05¼	@	.06
No. 2 Kraft	.03¾	@	.04¼
Southern Kraft No. 1	—	@	.03¾
Southern Kraft No. 2	—	@	.02¾
Common Bogus	.03	@	.04

(Delivered Philadelphia)

News Print Rolls	46.00	@	—
Straw Board	32.00	@	—
News Board	30.00	@	—
Chip Board	30.00	@	—
Wood Pulp Board	70.00	@	80.00
Binder Boards—			
No. 1, per ton	73.00	@	75.00
No. 2, per ton	62.00	@	65.00
Carload lots	60.00	@	65.00
Tarred Felts—			
Regular	52.25	@	54.25
Slaters (per roll)	.84	@	.94
Best Tarred, 1-ply (per roll)	1.95	@	2.10
Best Tarred, 2-ply (per roll)	1.50	@	1.60
Best Tarred, 3-ply	2.00	@	2.25

Domestic Rags (New)

(Price to Mill, f. o. b. Phila.)

Shirt Cuttings—			
New White, No. 1.	.03½	@	.04
New White, No. 2.	.02½	@	.04
Light Silesias	.02½	@	.03
Silesias, No. 1	.03	@	.03½
Black Silesias, soft.	.02½	@	.03
New Unbleached	.05	@	.05½
Washable, No. 1	.01	@	.01½
Blue Overall	.03	@	.03½
Cottons—According to grades—			
Washable, No. 2	.01	@	.02
New Blue	.01	@	.02
Fancy	.01½	@	—
New Black Soft	.02	@	.03
New Light Seconds	.01	@	.02
New Dark Seconds	1.50	@	1.75
Khaki Cuttings—			
No. 1 O.D.	.03	@	.03½
No. 2 Mixed	.02½	@	.03
Corduroy	.02	@	.02½
New Canvas	.03½	@	.04
New Black Mixed.	.02½	@	.03

Domestic Rags (Old)

White No. 1—			
Repacked	2.50	@	3.00
Miscellaneous	1.75	@	2.00
M. G.	3.00	@	3.50
Thirds and Blues—			
Miscellaneous	1.00	@	1.25
Repacked	1.50	@	1.75
Black Stockings (Export)	2.00	@	3.50
Roofing Stock—			
Foreign No. 1	.50	@	.75
Repacked	.70	@	.80

Bagging

(F. o. b. Phila.)

Gunny, No. 1—			
Foreign	1.25	@	1.50
Domestic	1.50	@	—
Manila Rope	2.00	@	2.25
Sisal Rope	1.25	@	1.50
Mixed Rope	1.00	@	1.10
Scrap Burlaps—			
No. 1	1.25	@	1.50
No. 2	.80	@	1.00
Wool Tares, heavy	2.75	@	—
Mixed Strings	1.15	@	1.25
No. 1 New Light Burlap	2.25	@	2.50
New Burlap Cuttings	2.00	@	2.25

Old Papers

(F. o. b. Phila.)

Shavings—			
No. 1 Hard White	1.60	@	1.70
No. 2 Hard White	1.50	@	1.60
No. 1 Soft White	1.40	@	1.45
No. 2 Soft White	1.10	@	1.15
No. 1 Mixed	.50	@	.60
No. 2 Mixed	.40	@	.50
Solid Ledger Stock	1.00	@	1.10
Writing Paper	.65	@	.70
No. 1 Books, heavy	.55	@	—
No. 2 Books, light	.40	@	—
No. 1 New Manila	1.10	@	1.15
No. 1 Old Manila	.60	@	.65
Print Manila	.40	@	.45
Container Manila	.35	@	.40
Old Kraft	.85	@	.90
Common Paper	.17½	@	.25
No. 1 Mixed Paper	.20	@	.30
Straw Board, Chip	.20	@	.30
Binders Board Chip	.20	@	.30
Corrugated Board	.35	@	.40
Overissue News	.45	@	.50
Old Newspaper	.30	@	.35

BOSTON

Paper

(F. o. b. Mill)

Ledgers—			
Sulphite	.06	@	.12½
Rag Content	.12	@	.30
All Rag	.36	@	.52½
Bonds—			
Sulphite	.05¾	@	.11½
Rag Content	.12	@	.30
All Rag	.36	@	.65
Writings	.06½	@	.20
Superfines	.11	@	.31
Book, Super	.06	@	.09
Book, M. F.	.05½	@	.08½
Book, Coated	.08½	@	.18
Coated Litho	.09	@	.12
Label	.09½	@	.15
Jute Manila No. 1	.11	@	.13
Manila, Sul. No. 1	.04¾	@	.06½
Manila, Sul. No. 2	.03¾	@	.04½
No. 1 Kraft	—	@	.04¾
No. 2 Kraft	—	@	.02½

(F. o. b. Boston)

Southern Kraft	.02¾	@	—

(F. o. b. destination in carload lots, f. o. b. mill in less than carload lots.)

Common Bogus	.02	@	.02¾

(Delivered New England points)

News Print, rolls	44.50	@	—
Straw Board, rolls.009	—	@	35.00
Straw Board in Sheets, basis 35s to 70s	—	@	40.00
Filled News Board	32.50	@	—
Chip Board	27.50	@	—
Chip Board (Creasing)	27.50	@	30.00
Single Manila Lined Chip	—	@	37.50
Single White, Patent Coated News Board—			
Bender	45.00	@	55.00
Wood Pulp Board	70.00	@	75.00
Binder Boards	62.00	@	75.00

Old Papers

(F. o. b. Boston)

Shavings—			
No. 1 Soft White	1.25	@	1.40
No. 1 Old Manila	.50	@	.60
No. 1 Mixed	.60	@	.70
No. 2 Mixed	.40	@	.50
Solid Ledger Books	1.20	@	1.40
Overissue Ledger Stock	1.15	@	1.30
Mixed Ledgers	.60	@	.70
No. 1 Books, heavy	.55	@	.65
No. 1 Books, light	—	@	.30
Crumpled Stitchless Book Stock	.50	@	.60
Manila Env. Cuttings	1.25	@	1.30
No. 1 Old Manila	.50	@	.60
White Blank News	.90	@	.95
No. 1 Kraft	.75	@	.85
Manila	.80	@	.90
No. 1 Mixed Papers	.15	@	.17½
Print Manila	.30	@	.40
Overissue News	.35	@	.45
Old Newspapers	.32½	@	.37½
Box Board Chip	.17½	@	.20
Corrugated Boxes	.25	@	.30
Screening Wrappers	.25	@	.32½

Bagging

(F. o. b. Boston)

Gunny No. 1—			
Foreign	1.00	@	—
Domestic	.62½	@	.67½
Manila Rope—			
Foreign	1.45	@	—
Domestic	—	@	1.60
Transmission Rope	1.00	@	—
Mixed Strings	.25	@	.30
Jute Rope	—	@	.75
Jute Carpet Threads	.45	@	.50
Bleachery Burlap	1.75	@	2.00
Scrap Burlap	.75	@	1.00
No. 1 Scrap Burlap	.65	@	.75
Scrap Sisal	.80	@	—
Scrap Sisal for shredding	—	@	.90
Wool Tares, heavy	.65	@	.75
New Burlap Cutting	.75	@	.90
Australian Wool Pouches	1.75	@	2.00
Heavy Baling Bagging	.90	@	1.10
Paper Mill Bagging	.30	@	.35
Bagging No. 2	.20	@	.25
No. 1 Burlap	1.75	@	2.00

Domestic Rags (New)

(F. o. b. Boston)

Shirt Cuttings—			
New Light Prints	—	@	.01½
New White No. 1.	—	@	.03½
New White No. 2.	.02¾	@	.03¼
Silesias No. 1	—	@	.03
New Black Silesias	.02½	@	.02¾
New Unbleached	—	@	.04½
Fancy	—	@	.02¼
Washable	—	@	.01¾
Cottons—According to grades—			
Blue Overalls	—	@	.03¾
New Black, soft	.04	@	.04½
Khaki Cuttings	.03	@	.03½
O. D. Khaki	.03½	@	.03¾
Corduroy	.02¾	@	.03
New Canvas	—	@	.05
B.V.D. Cuttings	.04	@	.04¼

Domestic Rags (Old)

(F. o. b. Boston)

Canvas	.04½	@	—
White No. 1—			
Repacked	3.00	@	3.50
Miscellaneous	1.50	@	1.75
White No. 2—			
Repacked	.02¼	@	.02½
Miscellaneous	.02	@	.02¼
Twos and Blues	.90	@	1.00
Thirds and Blues—			
Repacked	.75	@	.85
Miscellaneous	.70	@	.75
Black Stockings	2.00	@	2.25
Roofing Stock—			
No. 1	.40	@	.45
No. 2	.35	@	.40
No. 3	.25	@	.30

Foreign Rags

(F. o. b. Boston)

Dark Cottons	.50	@	.60
New No. 1 White Shirt Cuttings	3.75	@	4.00
Dutch Blues	1.25	@	1.50
New Checks & Blues	2.25	@	2.50
Old Fustians	—	@	.75
Old Linsey Garments	.55	@	.65

TORONTO

Paper

(F. o. b. Mill)

Bond—			
No. 1 Sulphite	.09¾	@	—
No. 2 Sulphite	.07½	@	—
No. 1 Colored	.09¼	@	—
No. 2 Colored	.08¾	@	.10½
Ledgers (sulphite)			
Ledgers, No. 1	.34½	@	—
Ledgers, No. 2	.25½	@	—
Writing	.09	@	.09½
Book—			
No. 1 M. F. (Carloads)	6.20	@	—
No. 3 M. F. (Carloads)	5.70	@	—
No. 4 M. F. (carloads)	4.75	@	—
No. 1 S. C. (carloads)	7.15	@	—
No. 3 S. C. (carloads)	6.20	@	—
No. 4 S. C. (carloads)	5.20	@	—
No. 1 Coated and Litho	12.50	@	—
No. 2 Coated and Litho	10.50	@	—
No. 3 Coated and Litho	10.00	@	—
Coated tinted	14.00	@	—
Wrapping—			
Rag Brown	4.25	@	—
White Wrap	2.00	@	—
"B" Manila	4.75	@	—
No. 1 Manila	5.25	@	—
Fiber	5.25	@	—
Kraft, M. F.	5.75	@	—
Kraft No. 2	5.25	@	—

(F.O.B. Cars Toronto)

News, per ton—			
Rolls (contract)	45.50	@	—
Sheets	50.50	@	—

Pulp

(F. o. b. Mill)

Ground Wood	18.00	@	20.00
Sulphite easy bleaching	40.00	@	—
Sulphite, news grade	38.00	@	—
Sulphite, bleached	48.00	@	58.00
Sulphate	50.00	@	—

Old Waste Paper

(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut	1.80	@	—
Soft White	1.40	@	—
White Blk. News	1.25	@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)	.90	@	—
Light and Crumpled Book Stock	.80	@	—
Ledgers and Writings	1.00	@	—
Manilas—			
New Manila Cut	1.25	@	—
Printed Manilas	.55	@	—
Kraft	1.25	@	—
News and Scrap—			
Strictly Overissue	.50	@	—
Strictly Folded	.50	@	—
No. 1 Mixed Paper	.40	@	—

Domestic Rags

(Price to mills f. o. b. Toronto)

No. 1 White Shirt Cuttings	.04¼	@	.04½
Fancy Shirt Cuttings	.02¼	@	.02½

COLOR PROBLEMS SOLVED

efficiently—accurately—economically

TECHNICALLY trained representatives

at your disposal.

Current dyestuffs stocked

at all branches

GDC

GENERAL DYESTUFF CORPORATION

230 FIFTH AVENUE
NEW YORK, N. Y.

Boston, Mass.
Providence, R. I.
Philadelphia, Pa.
Charlotte, N. C.
Chicago, Ill.
San Francisco, Cal.

PAPER TRADE JOURNAL

ESTABLISHED 1872

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD

SIXTY-FIRST YEAR

Published Every Thursday by the
LOCKWOOD TRADE JOURNAL CO., Inc.

GEO. S. MACDONALD, President. J. BANNINGA, Sec.-Treas.

Published at 34 No. Crystal St., East Stroudsburg, Pa.
Executive and Editorial Offices: 15 West 47th Street, New York
Chicago Office: 123 West Madison St.

TABLE OF CONTENTS

Superintendents Convention Program 11
Bids for Government Paper 11
Chicago Paper Conditions Favorable 12
New Pulp Association Organized 12
Work of Paper Foundation 13
New Bryant Insulating Paper 13
Ontario Mills Moderately Active 14
Backus Named in Timber Suit 14
Boston Market Quiet 15
Obituary 15
Philadelphia Market Continues Active 16
Studies of Pulp and Paper Mill Wastes 17
American Writing Shows Loss 19
Union Bag Financial Report 19
Better Prospects for New York Mills 19
Comments on "A Study of Physical Properties of Binders Board" 20
Mrs. King Heads Rex Paper Co. 21
New Brown Mechanical Flow Meter 22
For Reciprocal Treaties 23
American News Print 24
Construction News 25
Whealey Heads Corrugated Box 26

Editorial 28

Many Going to Savannah 29
Coty Co. Ships Big Bag Machine 29

Technical Section

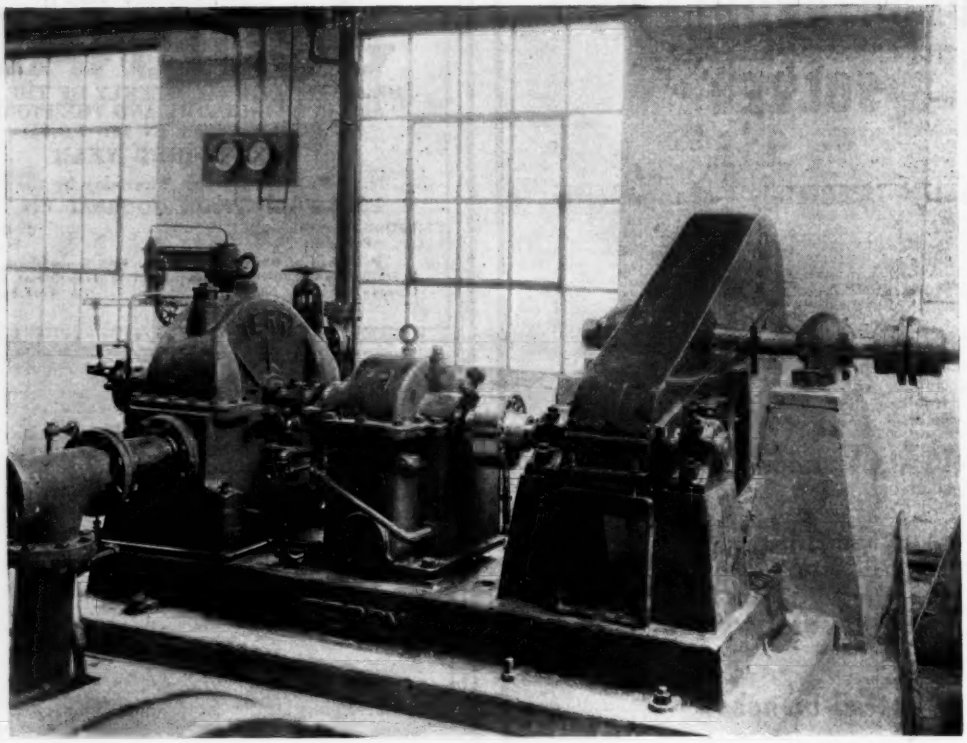
Pulp Testing Committee Annual Report 31
Synchronous Motor Control 34
Paper Testing Committee Report 37
Automatic Digester Control 38
Abstracts and Bibliography Committee Report for 1932 40
The Cameron-Dockery Proposal for Utilization of the Whole Cotton Plant as a Source of Cellulose for Papermaking 41
Imports of Paper and Paper Stock 43

New York Market Review 46
Miscellaneous Markets 48
Market Quotations 48

THE PAPER TRADE JOURNAL is indexed in Industrial Arts Index

Want and For Sale Advertisements, 52-53

TERRY
Paper Machine Drive



85 H.P. drive in an Eastern Mill.
Replaces a reciprocating engine

NEW LIFE FOR THE OLD PAPER MACHINE

The Terry drive in addition to being used with new paper machines has been employed extensively with older units.

Among its many advantages in cases of this kind are its ability to operate at higher paper speeds and its wide speed range. It also gives uniform regulation, clean exhaust steam for drying, power at low cost and highly dependable operation.

Terry engineers have accumulated a considerable amount of important information on applying new drives to old machines. Let them help you.

The TERRY STEAM TURBINE COMPANY
TERRY SQUARE, HARTFORD, CONN.
Steam Turbines - Gears - Shaft Couplings

T-1055